

Penn United Technologies
Response to EPA August 27, 2014 Hazardous Waste Inspection
Information Request – Reference No. C15-025

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According to an inspection report documenting EPA's August 27 (2014) Inspection, Building #1 of the Facility houses tool and die manufacturing processes. Waste streams generated in this building include lubricating oils, waste oil, alcohol, coolant and trash. The building previously contained four production lines until line #3 was removed. At the time of the inspection, a secondary storage area was in use where the line #3 used to be. A small workshop at the one end of Building #1 was also observed to be an accumulation area for universal waste.

CORRECTION: Some of the above statements are not correct and a corrected paragraph is stated below.

Building #1 does include predominantly tool and die, but also has a small mechanical stamping operation that supports testing progressive dies made in this shop. It also includes Shipping and Administration. Waste Streams generated in this building include lubricating oils (waste oil), coolant and trash. Alcohol waste is not generated in this building. The reference to removal of a production line is in error as well. I believe this reference is in relationship to activity in our electroplating building and will be discussed later. Therefore, the secondary storage reference is also incorrect as is the accumulation area for universal waste.

1. Please answer the following questions in the terms of at the time of the inspection. If any changes have occurred since the inspection, please include both responses and a date that reflects when each change occurred.
 - a. Describe each waste stream that is generated in Building #1. Please provide a hazardous waste determination for each of these wastes and an explanation of how each determination was made including any documents used in making each determination.
 - i. Waste Oil

This waste stream is Waste Oil as defined by the PA Dept. of Environmental Protection, but Used Oil as defined by EPA 40 CFR 279. It is generated from recovered stamping oil and machine lubricants. The hazardous waste determination was made by sampling the waste (used) oil with analysis by third party laboratory. Most recent results are for the sample collected October 3, 2014, with results attached and labeled as Question 1.

 - a. (i). Previous analysis was September 29, 2011.

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ii. Used Coolant

The waste stream of Used Coolant is generated from our machining and grinding operations in Building #1. There was only one type of coolant being used at the time of the inspection and the same coolant is being used today. The hazardous waste determination was made by sampling the used coolant with analysis conducted by a third party laboratory. Most recent results are for the sample collected March 5, 2015, with results attached and labeled as Question 1. a. (ii). Previous analysis was October 2, 2014 and September 29, 2011.

iii. Plant Trash

Plant trash is generated from office and manufacturing stations and categorized as listed on Form U dated February 18, 2014 identified as Question 1.a.(iii). The most recent Form U is dated January 7, 2015.

- b. Identify each satellite accumulation container present; including what type of waste is stored in each container. Mark the location of each such container on a site layout diagram along with where the corresponding waste is generated.**

This building does not generate any RCRA hazardous waste and therefore a satellite accumulation area does not exist.

- c. Describe the flow of wastes contained in satellite accumulation areas in Building #1 from generation to shipment off-site. Include all locations in which it is stored and time spent at each location leading up to the offsite shipment.**

This building does not generate any RCRA hazardous waste and therefore a satellite accumulation area does not exist.

- d. Describe the flow of wastes generated in Building #1 that are not contained in satellite accumulation areas from generation to shipment offsite. Include all locations in which it is stored and time spent at each location leading up to the offsite shipment.**

The two waste streams described above, Waste (Used) Oil and Used Coolant are generated in Building #1.

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Waste (Used) Oil is generated from two category locations in Building #1; lubricants used on parts and collected from mechanical stamping presses and equipment lubrication. The used coolant is from machining or grinding operations.

e. What is the exact date that the production line #3 was removed from service?

Building #1 does not have a #3 production line. I believe this question is for the electroplating Building #4 and process.

In June of 2014, Duplex 4 was temporarily removed from service to relocate it to a new spot on the electroplating floor to segregate plating operations. It was out of service for approximately 1 month. Each Duplex processes parts for specific components and during this time no parts would have been electroplated.

f. Why was the production line #3 removed from service?

Building #1 does not have a #3 production line. I believe this question is for the electroplating Building #4 and process.

Duplex 4 was temporarily removed from service to relocate it to a new spot on the electroplating floor to segregate plating operations. It was out of service for approximately 1 month. Each Duplex processes parts for specific components and during this time no parts would have been electroplated.

g. Please describe how the secondary storage area, located where production line #3 used to be, is used and how long waste is stored there before being moved to the Facility's less than 90-day storage area.

Building #1 does not have a #3 production line. I believe this comment is for the electroplating Building #4 and process.

The description of secondary storage was an area on the electroplating floor where precious metal drums were staged so they could be mixed and sampled to determine the precious metal content. It is difficult to determine the time these containers were in this location as the chemist that managed this process left in August of 2015. In discussion with the Team Leader and Electroplating Engineer, it is estimated this would take from 2 to 5 days, depending upon the number of drums removed from the satellite accumulation areas.

Following the August 27, 2014 inspection, our process was modified such that drums are now mixed and sampled in each satellite accumulation area with the 3 days of being filled then moved to the 90 day waste accumulation area.

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- h. Please describe the Facility's process to label and date hazardous waste drums. When are the drums labeled as hazardous waste? When is the start accumulation date marked on the drum?**

Building #1 does not generate hazardous waste. I believe this comment is for the electroplating Building #4 and process.

The Facility's process to label and date hazardous waste drums is provided in our document ENV-0004, Hazardous Waste Management, attached as Question 1.h..

According to the inspection report documenting EPA's August Inspection, Building #2 of the Facility houses a stamping process, secondary operations and warehousing. Waste streams in this building include trichloroethylene (F001), oily waste water, waste lubricating oil and trash.

- 2. Please answer the following questions in terms of at the time of the inspection. If any changes have occurred since the inspection, please include both responses and a date reflecting when each change occurred.**

- a. Describe each waste stream that is generated in Building #2. Please provide a hazardous waste determination for each of these wastes and an explanation of how each determination was made including any documents used to make each determination.**

- i. Trichloroethylene**

The waste trichloroethylene is generated from a batch vapor degreasing unit used for cleaning parts from the mechanical stamping process. The degreaser is regulated under our Operating State Only Permit No. 10-00333. Waste trichloroethylene that is removed from the degreasing unit is stored in a 55-gallon steel drum and kept in the satellite accumulation area. The drum is labeled with a hazardous waste label in this area. When full, it is transferred to the 180-day waste accumulation area. This area is covered by our Small Quantity Generator ID number PAR 000 028 258 (which was outside the scope of the August 2014 Inspection.) The hazardous waste determination was made by sampling the waste trichloroethylene with analysis conducted by a third party laboratory. Most recent results are for the sample collected October 3, 2014, with results attached and labeled as Question 2. a. (i). The previous analysis was on August 28, 2009.

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ii. Oily Waste Water

The oily waste water is a non-hazardous, residual waste that is generated from a water based cleaning unit. The wash and rinse water is monitored by turbidity and when established levels are exceeded, the wash and rinse water is transferred to a holding tank. When the storage tank is approximately 75% of capacity, it is scheduled for pick-up. The hazardous waste determination was made by sampling the waste oily water with analysis conducted by a third party laboratory. Most recent results are for the sample collected October 3, 2014, with results attached and labeled as Question 2. a. (ii). The previous analysis was on September 29, 2011.

iii. Waste Lubricating Oil

All of the waste lubricating oils for this campus are combined into one of two collection areas. The response to question 1.a.i. is the same for this waste stream generated in Building #2.

iv. Plant Trash

The plant trash for Buildings #1 and #2 are placed into the same residual waste receptacles. The response is the same as 1.a.iii.

b. Describe how the trichloroethylene (F001) waste is generated. Provide a detailed process of how, how much, and how often this waste stream is generated.

The waste trichloroethylene is generated from a Forward Technology F-300 batch vapor degreasing unit used for cleaning parts from the mechanical stamping process. This process is regulated under our Operating State Only Permit No. 10-00333. This unit through the vaporization and condensation of trichloroethylene creates a reflux cycle that cascades the solvent from the rinse station to the wash station and then to the boil sump. As the temperature of the boil sump increases, this indicates the boil sump has accumulated oil and the boil sump is emptied into a 55-gallon storage drum. In addition, the filters are drained to remove collected water and occasionally, the entire degreasing unit is drained due to customer requirements (medical parts).

The volume of waste trichloroethylene varies monthly based upon the type and number of parts that are cleaned. The quantity of addition and removal of trichloroethylene is logged for each event. To best quantify the amount of this waste stream that is generated, the last three years of material removed is reported below;

2012	1198 pounds
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2013 953 pounds

2014 1685 pounds

- c. **Where is the F001 waste stored? Please describe the flow of this waste from point of generation to shipment offsite, including any satellite containers, all locations in which containers are stored in and the time frame it is stored there.**

When the waste trichloroethylene is removed from the degreasing unit, it is placed into a 55-gallon steel drum that has been labeled as hazardous waste. The drum is stored in the satellite storage area in the same room as the degreaser. See Drawing #1 for Question 2.c. When the drum is full, it is moved to the 180-day waste accumulation area that is used for this waste stream only. The storage area is inspected and documented weekly. Prior to 180 days, the waste is scheduled for pick-up. The waste trichloroethylene is recycled. Manifests of each shipment are retained for five (5) years.

- d. **Are there any satellite accumulation areas within Building #2? If so, please identify each container, what type of waste it contains, where it is located, and where its corresponding waste is generated. Please mark location of containers and where it is generated on site map.**

Please reference the response to Question 2.c. above. The satellite and 180-day waste accumulation areas have a purple arrow pointing to the labeled station on the Drawing #1.

- e. **Please describe the flow of any wastes associated with Building #2 from point of generation to shipment offsite, including satellite accumulation containers, all locations in which it is stored and the time frame it is stored there.**

There are two waste streams generated in Building #2 as listed above; waste lubricating oil and oily waste water.

- f. **Describe the facility's process for labeling and dating hazardous waste drums, including satellite accumulation containers generated within Building #2.**

At the time of the August 2014 inspection our procedure for labeling hazardous waste drums included a hazardous waste label that was completed and affixed to the drum at the point it was first placed into service. We used a satellite storage area (see Drawing #1 for question 2.c. above) for the waste trichloroethylene. When the drum was filled, the date was placed on this label and it was moved within 3 days to the 180-day waste accumulation area. This is managed under our SQG EPA ID No. PAR 000 028 258. We have since received ISO 14000 certification and have better documented this procedure

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in ENV-0004, Hazardous Waste Management, and attached Question 1.h.. It is also covered during our annual RCRA training.

According to the inspection report documenting EPA's August Inspection, Building #3 is used for maintenance purposes. Waste streams in this building include parts cleaning solutions (F006, D039), fluorescent light bulbs and trash.

- 3. Please answer the following questions in terms of at the time of the inspection. If any changes have occurred since the inspection, please include both responses and a date that reflects when each change occurred.**

- a. Describe each waste stream that is generated in building #3. Please provide a hazardous waste determination for each of these wastes and an explanation of how each determination was made including any documents used to make each determination.**

The maintenance location in Building #3 was predominantly an area for a few of the maintenance employees to use as a staging area from which they moved to other locations for to perform their work. This building did house the majority of the new and all of the used fluorescent lamps. In addition, latex paint and aerosol cans were stored at this location. This location did NOT have a parts cleaning station.

- i. Used Fluorescent Lamps**

The fluorescent lamps are stored on the second floor at this location. They are accumulated for up to a year and then picked up by an electrical supply contractor who is certified to accept them for recycling. Certificates of Recycling are attached as Question 3.a.1 and 3.a.2 for 2013 and 2014 respectively. No hazardous waste characterization is needed for this universal waste stream.

- ii. Empty Aerosol Cans**

Empty aerosol cans at the time of the inspection were hand punctured and discarded in residual waste containers. Since the time of the inspection, we have purchased puncturing units with associated filters and placed collection containers in our manufacturing areas. The collected empty aerosol containers are then punctured and discarded into our scrap metal recycling hoppers by maintenance personnel.

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iii. Plant Trash

The plant trash from Building #3 is placed in one of two residual waste hoppers located adjacent to the building. Plant trash is categorized as listed on Form U dated February 18, 2014 identified as Question 1.a.(iii). The most recent Form U is dated January 7, 2015.

b. Please describe the parts cleaning solutions (F006, D039) generated in this building. Include how much and how often this waste is generated.

No parts cleaning solution is generated from Building #3. There are not parts cleaners in Building #3. Further, I am confused about the waste codes F006 and D039 you listed for parts cleaning solution. F006 is waste water treatment sludge from electroplating operations and D039 is for tetrachloroethylene. These are not typical for parts cleaning solvent in my experience.

c. Provide Material Safety Data Sheets (MSDS) for all of the parts cleaning solutions (F006, D039) mentioned in the facility response to question 3b.

As there are no parts cleaners or parts cleaning solution generated in Building #3, no MSDS is required.

d. Describe the flow of waste associated with Building #3 from generation to offsite shipments. Include any satellite accumulation containers utilized, and all locations the waste is stored along the way including the timeframe it is stored.

i. Used Fluorescent Lamps

Used fluorescent lamps are sourced from every building on this campus. Only maintenance employees are permitted to change out these lamps. All used fluorescent lamps are stored in the second floor of Building #3, in closed, labeled and dated cardboard boxes. These lamps are picked up by an approved Universal Waste handler at least once a year for recycling.

ii. Empty Aerosol Cans

Empty aerosol cans are collected in special containers throughout the facility buildings. When the containers are filled, maintenance employees will collect them and take them to Building #3, puncture them in an approved puncture system with vent filter. The empty cans are then placed in a scrap metal container for recycling.

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- e. **Describe the Facility's process for labeling and dating hazardous waste drums, including satellite accumulation containers, generated within Building #3.**

At the time of the August 2014 inspection our procedure for labeling hazardous waste drums included a hazardous waste label that was completed and affixed to the drum at the point it was first placed into service. During the time of the inspection, there was no hazardous waste generated or stored in building #3 and there was no satellite storage area. This has not changed since the inspection. We have since received ISO 14000 certification and have better documented this procedure.

According to the inspection reports documenting EPA's August Inspection, Building #4 houses the Facility's electroplating operations. Various metals including nickel, tin, tin-lead, gold, silver and palladium are used in the Facility's electroplating operations. Waste streams generated in this building include electroplating rinse (D002, F009), electroplating sludge (F006), gold cyanide stripper solution and solids (D003, F009) and gold and palladium filter cartridges (D003).

4. **Please answer the following questions in terms of at the time of the inspection. If any changes in those responses have occurred since the inspection, please include both responses and a date that reflects when each change occurred.**
- a. **Describe each waste stream that is generated in Building #4. Please provide a hazardous waste determination for each of these wastes and an explanation of how each determination was made, including and documents used to make each determination.**

i. Spent Aqueous Tin-Lead Filter

This is a cartridge filter used to remove solids from the tin-lead plating bath. These filters carry an F006 designation and D002 and D008 based upon the analysis performed August 31, 2010, attached as Question 4.a.i.

ii. Spent Aqueous Nickel Filter

This is a cartridge filter used to remove solids from the nickel plating bath. Analysis for this waste material is attached as Question 4.a.ii. These filters carry an F006 designation.

iii. Spent Palladium Filters

This is a cartridge filter used to remove solids from the palladium plating bath. These filters carry an F006 designation.

During the August 27, 2014 inspection, discussion with the Inspector about exemption of the palladium filters as a hazardous waste based upon the recovery of the precious metal was explored further and based upon 40 CFR Subpart F, 266.70, we did request an opinion

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when our report was submitted to Mr. Robert Staves dated October 3, 2014. We have not received a reply to date. I again, ask if this exemption applies to this material.

iv. Spent Plating Rinse Solution

The rinse solution from all of the non-precious metal plating tanks is drained to a storage tank, T2 in the basement of plating. This waste carries a designation of D002 and D008 based upon analysis, reference attachment Question 4.a.iv. This waste is treated in a permitted treatment system (Hazardous Waste Permit-by-Rule Activity) approved by the PA Department of Environmental Protection on November 30, 2011.

v. Spent Citric Acid Solution

Citric acid is used for the passivation of metal components prior to shipment. When the passivation solution becomes turbid, it is changed out. The analysis attached as Question 4.a.v., supports our D002 designation for this waste.

vi. Spent Copper/ Nickel/ Tin/ Lead Resin

One plating line duplex requires the final rinse provide extremely low concentrations of copper, nickel, tin and lead to meet customer specifications. When this part is electroplated the final rinse tanks are circulated through filter tanks that use a special resin to capture these metals. Analysis of the spent resin, Question 4.a.vi., indicates a waste designation of D002 as one sample analysis represented a pH of 2.0 su.

vii. Gold Cyanide Solution

When the gold plating and stripper bath is changed, the resulting gold cyanide solution is processed to reclaim the precious metal. This waste stream has been managed as a hazardous waste with a separate process for sampling the containers for precious metal content and holding in a separate area for security purposes. Content of the solution is based upon Generator Knowledge of the process.

During the August 27, 2014 inspection, discussion with the Inspector about exemption of the gold cyanide solution as a hazardous waste based upon the recovery of the precious metal was explored further and based upon 40 CFR Subpart F, 266.70, we did request an opinion when our report to Mr. Robert Staves dated October 3, 2014 was submitted. We have not received a reply to date. I again, ask if this exemption applies to this material.

viii. Silver Cyanide Solution

When the silver plating bath is changed, the resulting silver cyanide solution is processed to reclaim the precious metal. This waste stream has been managed as a hazardous waste

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with a separate process for sampling the containers for precious metal content and holding in a separate area for security purposes. Content of the solution is based upon Generator Knowledge of the process.

During the August 27, 2014 inspection, discussion with the Inspector about exemption of the silver cyanide solution as a hazardous waste based upon the recovery of the precious metal was explored further and based upon 40 CFR Subpart F, 266.70, we did request an opinion when our report to Mr. Robert Staves dated October 3, 2014 was submitted. We have not received a reply to date. I again, ask if this exemption applies to this material.

ix. Evaporator Slurry Residue

This waste stream is generated from the hazardous waste treatment process located in the basement of Building #4. The waste collected in tanks T2 and LT2 are processed to adjust the pH and remove metals. The treated waste is transferred to a plate and frame filter press and the resulting liquid is processed through an evaporator, from which the evaporator residue is created. The analysis of this waste stream is attached as Question 4. a. ix. and carries an F006 designation due to its derivation from the plating rinse solution.

x. Filter Press Cake

This waste stream is generated from the hazardous waste treatment process located in the basement of Building #4. The waste collected in tanks T2 and LT2 are processed to adjust the pH and remove metals. The treated waste is transferred through a plate and frame filter press that yields a dry filter cake. Analysis of the filter cake is provided in attachment Question 4.a.x. This carries a waste designation of F006 because of its derivation from the plating rinse solution.

xi. Silver and Gold Filters / Solids

This waste is a filter cartridge that is used for the removal of solids in the gold and silver cyanide plating baths. The filters when removed are drained to collect the liquids as gold or silver cyanide plating solution and the filters stored and sent for reclaim of the precious metals. Generator knowledge is used to determine the waste codes of D003, D011, F007 for the silver filters and D003, F007 for the gold filters.

During the August 27, 2014 inspection, discussion with the Inspector about exemption of the silver and gold filters as a hazardous waste based upon the recovery of the precious metal was explored further and based upon 40 CFR Subpart F, 266.70, we did request an opinion when our report to Mr. Robert Staves dated October 3, 2014 was submitted. We have not received a reply to date. I again, ask if this exemption applies to this material.

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xii. Plating Trench Sludge

This waste stream is generated if or when the drainage trenches are cleaned. The plating rinse solution is drained from the plating rinse bath to the storage tank via the drainage trenches. All material collected during this process is segregated for disposal. Analysis of this waste is attached as Question 4.a.xii. and carries the designated waste codes of D002 and F006.

xiii. Spent Black Oxide Waste

Prior to the August 24, 2014 inspection, a black oxide treatment was employed. It was suspended and the area cleaned in May of 2014. The waste stream generated during this process was spent black oxide solution. Analysis for this waste stream is attached as Question 4.a.xiii. and the waste carries the designated waste code of D005.

b. Describe where the gold and palladium filter cartridges (D003) are generated.

Filter cartridges are used in the electroplating process to remove solids from the electroplating baths. The gold and palladium filter cartridges are from these respective baths. The palladium filter cartridges do NOT carry a D003 waste code as cyanide is not used with this precious metal.

c. Are these filter cartridges sent for disposal or treatment. Please describe what happens to the cartridges once they leave the facility. Provide the name and locations of the company/ facility that the cartridges are sent to.

The filters from the gold and palladium baths are sent for precious metal reclamation. These are sent to different vendors for the same treatment. The filters are burned in a rotary kiln, with the resulting ash digested to remove the precious metal. Please refer to the attachment labeled Question 4.c. for the name of the companies that provide this service for us.

d. Describe what waste is being stored in each of the 55-gallon drums shown in Photo #7 (DSCN0143.jpg) of the inspection report and where each was generated.

The blue drum in the corner of this room with the hazardous waste and poison labels contains used precious metal filters from the gold or silver plating baths. The blue drum with the non-hazardous waste label contains palladium filters from the palladium bath. These drums are located in this secured satellite accumulation area.

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- e. Provide a detailed flow from generation to offsite shipment of the waste pictured in Photo #7 (DSCN0143.jpg) of the inspection report, including any satellite accumulation containers, secondary storage areas, and time spent in each location.**

The two blue drums in Photo #7 are in a secured satellite accumulation area for precious metal filters, gold, silver and palladium. The filters are accumulated for 30 days, then pulled and moved to a 55-gallon drum for the 90-day waste accumulation area in the basement of Building #4. The drums are then shipped to one of the companies listed in the attachment labeled Question 4.c. within 90 days.

- f. Describe the Facility's process for labeling and dating hazardous waste drums, including satellite accumulation containers, generated and/ or stored within Building #4.**

At the time of the August 2014 inspection our procedure for labeling hazardous waste drums included a hazardous waste label that was completed and affixed to the drum at the point it was first placed into service. We used a satellite accumulation area for collection of the gold, silver and palladium solutions. When the drum is filled, the date is placed on this label and it was moved within 3 days to a secondary storage area on the electroplating floor where precious metal drums were staged so they could be mixed and sampled to determine the precious metal content. It is difficult to determine the time these containers were in this location as the chemist that managed this process left in August of 2015. In discussion with the Plating Team Leader and Project Manger, it is estimated this would take from 2 to 5 days, depending upon the number of drums removed from the satellite accumulation areas. The drums were then moved to the 90-day waste accumulation area in the Basement of Building #4.

Following the August 27, 2014 inspection, our process was modified such that drums are now mixed and sampled in each satellite accumulation area with the 3 days of being filled, then moved to the 90 day waste accumulation area.

We have since received ISO 14000 certification and have better documented this procedure in ENV-0004, Hazardous Waste Management, attached Question 1.h.. It is also covered during our annual RCRA training.

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- g. Describe the waste that is being contained in 55-gallon drums as seen in Photo #8 (DSCN0144.jpg) of the inspection report.**

The waste in the blue drum in Photo #8 of the inspection report that has the hazardous waste, toxic and gold reclaim label contains the gold cartridge filters that are being collected from the satellite accumulation area for transfer to the 90 day hazardous waste accumulation area.

The second blue drum is turned such that the label could not be identified in Photo #8, but as this is the end of the month and the procedure is to transfer the precious metal filters at the end of the month and its proximity to the gold filter drum, I believe this drum did contain the palladium filters which were in the same room next to the gold filters.

- h. Describe the Facility's process to label and date hazardous waste drums. Provide an explanation as to how the Facility knows those two 55-gallon drums (Photo #8, DSCN0144.jpg) were not being stored for longer than 90 days.**

At the time of the August 2014 inspection our procedure for labeling hazardous waste drums included a hazardous waste label that was completed and affixed to the drum at the point it was first placed into service. We did use satellite storage areas for collection of the some hazardous wastes. When a drum is filled, the date is placed on this label and it was moved within 3 days to a 90-day or 180-day hazardous waste storage area, with an exception for secondary storage area on the electroplating floor where precious metal drums were staged so they could be mixed and sampled to determine the precious metal content. Drums were shipped offsite for treatment or disposal within the 90 / 180 days.

Since the August 2014 inspection, we received ISO 14000 certification and have better documented this procedure in ENV-0004, Hazardous Waste Management, attached Question 1.h.. It is also covered during our annual RCRA training.

Regarding how the Facility knows the drum with the undated hazardous waste label was shipped within 90 days, please refer to attachment 4.h.. This is a record of the Uniform Hazardous Waste Manifest, 007672311 FLE, with 2 drums of Waste Cyanides, Inorganic, solids, n.o.s. (Gold). In accordance with the plating procedure to ship each quarter (90 days), the drum that was identified in Photo #8, was gold filters going to the 90-day accumulation area on or later than August 27, 2014. Shipment on October 31, 2014 was within the 90 days.

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5. Building #5 is not discussed within the inspection report that documents EPA's August Inspection. Please answer the following questions in terms of at the time of the inspection. If any changes in those responses have occurred since the inspection, include both responses and a date that reflects when each change occurred.

- a. Describe each waste stream that is generated or stored in Building #5. Please provide a hazardous waste determination for each of these wastes and an explanation of how each determination was made, including any documents used to make each determination.

There is no Building #5 at this location.

- b. Describe the flow of each of these wastes from generation to offsite shipment, including any satellite accumulation containers, secondary storage areas, and time spent in each location.

There is no Building #5 at this location.

- c. Describe the Facility's process for labeling and dating hazardous waste drums, including satellite accumulation containers generated within Building #5.

There is no Building #5 at this location.

According to the inspection report documenting EPA's August Inspection, Building #6 houses the tool and die manufacturing and precision assembly processes. Waste streams in this building include waste coolants and trash. The basement of Building #6 is where the Facility's designated less than 90 day hazardous waste accumulation area ("HWAA") is located. There were 25 full, 55-gallon drums in this HWAA at the time of the inspection as well as an orange cardboard box contained D003 hazardous waste. 5 of the 25 drums were labeled as non-hazardous waste, and 20 were labeled as hazardous waste. 11 of the 20 hazardous waste drums located in the Building #6 HWAA were not labeled with a start a start accumulation date.

CORRECTION: Some of the above statements are not correct and a corrected paragraph is stated below.

The above description of the "HWAA" accumulation is erroneous with regard to the location. The area that the Inspector was describing was not the basement of Building #6, which has no basement, but the basement of Building #4, the 90-day hazardous waste accumulation area for the electroplating operation. Secondly, the statement of the number of drums stored in this location based upon the photographs provided, I am unable to confirm or refute the total count of 55-gallon drums, the number

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of 55-gallon drums that are labeled as non-hazardous, the number of 55-gallon drums that are labeled as hazardous and the number of 55-gallon drums that were reported to not have an accumulation start date.

- 6. Please answer the following questions regarding Building #6 in terms of at the time of the inspection. If any changes in those responses have occurred since the inspection, please include both responses and a date that reflects when each change occurred.**

- a. Describe each waste stream that is generated in building #6. Please provide a hazardous waste determination for each of these wastes and an explanation of how each determination was made, including any documents used to make each determination.**

i. Waste Coolant

The waste stream of Waste Coolant is generated from our machining and grinding operations in Building #6. There was only one type of coolant being used at the time of the inspection and the same coolant is being used today. The hazardous waste determination was made by sampling the used coolant with analysis conducted by a third party laboratory. Most recent results are for the sample collected March 5, 2015, with results attached and labeled as Question 1. a. (ii). Previous analysis was October 2, 2014 and September 29, 2011.

ii. Waste Lubricating Oil

This waste stream is Waste Oil as defined by the PA Dept. of Environmental Protection, but Used Oil as defined by EPA 40 CFR 279. It is generated from recovered machine lubricants and EDM oil. The hazardous waste determination was made by sampling the waste (used) oil with analysis by third party laboratory. Most recent results are for the sample collected October 3, 2014, with results attached and labeled as Question 1. a. (i). Previous analysis was September 29, 2011.

iii. Plant Trash

The plant trash from Building #6 is place in one of two residual waste hoppers located adjacent to the building. Plant trash is categorized as listed on Form U dated February 18, 2014 identified as Question 1.a.(iii). The most recent Form U is dated January 7, 2015.

Penn United Technologies
Response to EPA August 27, 2014 Hazardous Waste Inspection
Information Request – Reference No. C15-025

- b. Describe the flow of wastes generated in Building #6 from generation to offsite shipment, including any satellite accumulation containers, all locations in which the waste is stored and how much time waste spends at each location.**

i. Waste Coolant

Waste coolant is generated from the machining and grinding centers. The waste coolant is collected and placed in a storage tote and when full, a waste contractor pumps the tote empty. The frequency that the waste coolant spends on site varies depending on the volume of work, but in 2014 and 2105 it is averaging 2 to 3 months.

ii. Waste Lubricating Oil

Waste oil is collected from machining centers, used EDM oil and machine lubricants. The oils are all placed into a collection tote and when full, a waste contractor pumps the tote empty. The frequency that the waste coolant spends on site varies depending on the volume of work, but in 2014 and 2105 it is averaging 2 to 3 months.

- c. Describe the Facility's process for labeling and dating waste drums that are stored in the Building #6 HWAA located in the building's basement.**

Building #6 does not have a HWAA, nor does Building #6 have a basement. I believe this question relates to Building #4 and this has been answered in question #4.

- d. How long were the hazardous waste drums seen in the Facility's HWAA during the August Inspection being store there prior to the inspection?**

There were NOT any hazardous waste drums at this location during the time of the August 27 Inspection. Building #6 does not have a HWAA, nor does Building #6 have a basement. I believe this question relates to Building #4 and this has been answered in question #4.

- e. Please document how the Facility knows how long those drums were in the less than 90 day HWAA and any proof the Facility may have documenting that the hazardous waste drums were not in the HWAA longer than 90 days.**

There were NOT any hazardous waste drums at this location during the time of the August 27 Inspection. Building #6 does not have a HWAA, nor does Building #6 have a basement. I believe this question relates to Building #4 and this has been answered in question #4.

Penn United Technologies
Response to EPA August 27, 2014 Hazardous Waste Inspection
Information Request – Reference No. C15-025

- f. Indicated which Uniform Hazardous Waste Manifest the drums located in the HWAA of Building #6 during the August Inspection was sent out on.**

There were NOT any hazardous waste drums at this location during the time of the August 27 Inspection. Building #6 does not have a HWAA, nor does Building #6 have a basement. I believe this question relates to Building #4 and this has been answered in question #4.

- 7. Regarding Universal Waste generation and management at the Facility, please answer the following questions in terms of at the time of the inspection. If any changes have occurred in those responses since the inspection, please include both responses and provide a date that reflects when each of those changes occurred.**

- a. Describe in detail the Facility's process of handling Universal Waste bulbs at the Facility. Include how often bulbs are changed and on average how much is produced each month.**

The majority of indoor lighting is provided by fluorescent lamps. Lamps are removed from service predominantly when lamps have reached end-of-life, i.e., no longer work. Infrequently we will remove functional lamps and store for them use in other building locations when entire light systems are changed out. These are good working lamps. Our procedure for handling these lamps is that our maintenance employees will remove and handle all lamps. Lamps that reached end-of-life are to be placed inside of cardboard boxes (those that new lamps arrived in), closed and labeled with a Universal Waste label that says Used Fluorescent Lamps, and dated. Frequency varies and we do not track how much is produced monthly, rather what is shipped to a Universal Waste handler. Please reference the attachments for Questions 3.a.1 and 3.a.2 for the quantities that were picked up by the handler.

- b. Describe the facility's schedule for sending Universal Waste bulbs offsite. How often are they sent and what vendor are they sent to?**

The used Universal Waste lamps are shipped picked up by Scott Electric. They do not remain on-site in storage for more than a year. The Certificates of Recycling for the last two years are provided for Questions 3.a.1 and 3.a.2.

Penn United Technologies
Response to EPA August 27, 2014 Hazardous Waste Inspection
Information Request – Reference No. C15-025

- c. **Are the bulbs observed during the August Inspection still present at the facility? These can be seen in Photos # 14 (DSCN0153.jpg) and 15 (DSCN0154.jpg) of the Inspection Report. If they have been shipped offsite, please provide the manifest or bill of lading for that shipment.**

No. The lamps that were observed during the August 27 Inspection were shipped off-site on May 5, 2015. Please reference attachment Question 7.c.

- d. **Please provide bills of lading or manifests for Universal Waste bulb shipments made in the last 3 years.**

The Manifest / Bill of Lading for years 2013 to 2015 are attached as Questions 3.a1., 3.a.2. and 7.c.

8. **Regarding the Facility's hazardous waste inspection schedule and weekly hazardous waste inspection performance, please answer the following questions in terms of at the time of inspection. If any changes have occurred in those responses since the inspection please provide both responses and a date that reflects when each change occurred.**

- a. **Describe the Facility's hazardous waste inspection process, including what areas are inspected.**

The hazardous waste accumulation areas located in the basement of Building #4 and in Building #2 are inspected weekly.

- b. **Provide the Facility's written inspection schedule.**

This is captured in our procedure ENV-0004, attached as Question 1.h..

- c. **Provide a copy of Facility hazardous waste weekly inspection records for January 2012 until present day. If more than one location is inspected, provide these documents for all locations.**

These are attached as records for Question 8. c. 1., Building #4, 90-day hazardous waste accumulation area and Question 8. C. 2., Building #2, 180-day hazardous waste accumulation area.

Penn United Technologies
Response to EPA August 27, 2014 Hazardous Waste Inspection
Information Request – Reference No. C15-025

9. Regarding any tanks that may be located at the Facility. Please answer the following questions in terms of at the time of the inspection. If any changes in those responses have occurred since the inspection, please provide both responses and a date that reflects when each change occurred.

a. Provide a comprehensive list of each waste storage tank located at the Facility.

- | | |
|---|--|
| i. <u>T2 Tank</u> | Contains Plating Rinse Solution |
| ii. <u>LT2 Tank</u> | Contains Plating Rinse Solution |
| iii. <u>T30 Equalization Tank</u> | Contains Plating Rinse Solution that is thoroughly mixed. |
| iv. <u>T20 Treatment Tank</u> | Contains Plating Rinse Solution, and one or more of the following depending upon test results: Muriatic Acid, 50% Caustic Soda, AP 720 flocculent, Bezo Flocc 90C flocculent or ACP 90 flocculent. |
| v. <u>S1 and S2</u>
<u>Evaporator Slurry Tanks</u> | Contains liquid portion from evaporator that is not evaporated. |

b. Describe what is contained in each tank and provide a waste determination on all contents stored within tanks

The contents of each tank are listed in Question 9.a. Waste determinations are made for two tank contents only, plating rinse solution (LT2, T2 and T30) and Evaporator slurry residue (S1, S2) as the intermediate treatment tank is known to be plating rinse solution plus the treatment chemicals. The waste determinations for these two wastes are included in attachments Question 4.a.iv. and Question 4.a.ix..

c. Describe how the contents of each tank got there, including the process that generated the waste, how it was transferred into the tank, and where it goes when it leaves the tank.

i. Tanks T2 and LT2

Plating rinse solution from non-precious metal rinse tanks is drained into these tanks. From these tanks it is pumped into tank T30 for mixing. In the event that the treatment system is not able to process the waste, we do have approvals to ship this waste offsite for treatment.

Penn United Technologies
Response to EPA August 27, 2014 Hazardous Waste Inspection
Information Request – Reference No. C15-025

ii. Tank T30

This is the equalization tank for the treatment process. Plating rinse solution is pumped from tanks T2 or LT2 into this tank and mechanically mixed. From here the mixed plating rinse solution is pumped into tank T20.

iii. Tank T20

This is the treatment tank and contains mixed plating rinse solution that is pumped from tank T30 and a mixture of chemicals listed in Question 9.a.iv. above. The contents of this tank is also mechanically mixed and then pumped to the plate and frame filter press.

iv. Tanks S1 and S2

This is the storage tank for the evaporator slurry residue. When the evaporator has processed the liquid waste from the plate and frame press, the residue is pumped into these tanks and then transferred into drums for shipment for offsite disposal.

d. Please provide the inspection records for each hazardous waste tank located at the Facility for the last 3 years.

These are provided by attachment as Question 9.d.

e. Provide all 40 CFR Subpart J monitoring records from all monitoring conducted on each of the Facility's hazardous waste tanks for the last 3 years.

The hazardous waste storage tanks at this facility as detailed in question 9.a. above are exempt from 40 CFR 264/265 Subpart J as the volatile organic content of this waste is less than 500 ppm as reported in 40CFR 264.1082 (c)(1).

f. Provide engineering certificates for each hazardous waste tank located at the Facility.

The certificate is attached as Question 9.f.

Penn United Technologies
Response to EPA August 27, 2014 Hazardous Waste Inspection
Information Request – Reference No. C15-025

10. Regarding hazardous waste training that occurs at the Facility and employee job descriptions, please answer the following questions.

a. Provide a list of every employee position title that undergoes hazardous waste training at the Facility and provide a job description example for each of those titles.

i. Electroplating Technician

Controls activity of plating parts; including set-up, maintenance of the plating line, plating and inspection of parts and preparation of parts for shipping.

ii. Area Coordinator – Plating

Assists the Plating Manager oversee all plating efforts and processes, maintaining a safe and clean work environment.

iii. Team Leader – Plating

Supervises and coordinates all floor activities to achieve department goals and assure on-time, on-spec delivery of products to the customer.

iv. Chemist

Coordinate and analysis of plating baths, plating bath adjustments, collect and monitor operational data.

v. Electroplating Engineer

Manages the precious metal inventory, provides technical support for the plating process, reviews and reacts to monitoring data, recommends process improvements, manages hazardous waste process and materials.

vi. Project / Process Manager

Manages new product design and equipment acquisition/ installation, planning, supplier and customer liaison.

vii. Manufacturing Manager – Plating

Oversees the entire plating operation and achievement of business goals and department expectations. Aligns Department with Company vision and values and Penn United Business Plan.

Penn United Technologies
Response to EPA August 27, 2014 Hazardous Waste Inspection
Information Request – Reference No. C15-025

viii. Maintenance Technician

Provides maintenance service to support and maintain s smoother operation of the facility equipment and associated systems.

ix. Maintenance Specialist

Provides maintenance service to support and maintain s smoother operation of the facility equipment and associated systems, by applying specialized skill and knowledge.

x. Team Leader – Maintenance

Applies knowledge and skill to coordinate all daily maintenance activities, predict maintenance requirements, liaison with contractors, controls spare parts inventory.

xi. Secondary Operations Technician

Team member that cleans and sorts parts, inspection and packaging of parts for shipment.

xii. Area Coordinator – Secondary Operations

Assists the Stamping/ Second Ops Team Leader oversee all cleaning efforts and processes, maintaining a safe and clean work environment.

xiii. Team Leader – Stamping / Secondary Operations

Supervises and coordinates all floor activities to achieve department goals and assure on-time, on-spec delivery of products to the customer.

b. Provide hazardous waste training records for the most current 3 years for Paul Bergbigler, Rege Weleski, Kevin Kroneberg and Steve Berteotti.

These are attached as Question 10.b. for all employees that receive the annual RCRA training and include Paul Bergbigler, Rege Weleski and Steve Berteotti. Kevin Kroneberg is a Group Manager and is included in our response plan for the purpose of approving any financial needs for response and clean-up. He does not participate in any other role.

c. Provide job descriptions for Paul Bergbigler, Rege Weleski, Kevin Kroneberg and Steve Berteotti.

Paul Bergbigler Manager, Plating Manufacturing

Rege Weleski Team Leader, Plating

Penn United Technologies
Response to EPA August 27, 2014 Hazardous Waste Inspection
Information Request – Reference No. C15-025

Kevin Kroneberg Group Manager, PMJ / Maintenance

Steve Berteotti Manager, Environmental, Health & Safety

- d. Provide 2014 hazardous waste training records for any employee who transported hazardous waste drums from satellite areas to the secondary storage area to the less than 90 day storage area during that year.**

Any plating employee could have moved drums as referenced above in 2014. All of our plating employees receive annual RCRA Hazardous Waste training. A copy of the sign-in sheets for the 2014 training is attached as Question 10.d.1 and the training curriculum as Question 10.d.2.

- 11. In regards to the Facility's hazardous waste manifests. Please answer the following questions.**

- a. Provide all Uniform Hazardous Waste Manifests used to ship waste offsite from the Facility from January 2010 to the present day.**

These are provided as an attachment Question 11.a.



799 North Pike Road Cabot, PA 16023 - Phone: (724) 352-1507 Fax: (724) 352-4970 www.pennunited.com

November 25, 2015

Ms. Rebecca Serfass (3LC70)
Land and Chemicals Division
U.S. Environmental Protection Agency, Region III
1650 Arch Street
Philadelphia, PA 19103-2029

Re: Request for Information – Reference No. C15-025

Dear Ms. Serfass,

Enclosed is a copy of our response to the Request for Information received on September 29, 2015. It is related to the August 27, 2014 EPA inspection of Penn United's Facility at 799 N Pike Road, Cabot, PA associated with our LQG EPA ID No. PA0 000 193 409. Based upon some of the questions, I have also provided responses associated with our SQG EPA ID No. PAR 000 028 258.

I have also attempted to correct inaccuracies in the Inspection Report prepared by Mr. Robert Staves, Environmental Protection Specialist who performed this inspection. These are included below general Inspection comments in the Request for Information as well as in response to specific questions.

Also, thank you for providing the 30-day extension to prepare this response. In addition to working to recall issues specific to the 2014 inspection, our Electroplating Engineer left the company in August of 2015. The electronic copy of the digital photographs captured by the Inspector did help in our response.

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ISO 9001:2008, FDA Registered. ITAR Registered

Finally, the signed and dated certification statement listed within the Request for Information is listed below,

I certify that the information contained in this response to EPA's request for information and the accompanying documents is true, accurate and complete. As to the identified portions of this response for which I cannot personally verify their accuracy, I certify under penalty of law that this response and all attachments were prepared in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations.

Signature: _____

Name: _____

Title: _____

If there are any questions or you require additional information, please contact me at 724-352-1507 or by e-mail at Steve_Berteotti@pennunited.com.

Sincerely,


Stephen J. Berteotti
Manager, Environment, Health and Safety

Enclosures

Cc

Jim McKain, Manager, Human Resources
Karen Craig, Group Manager , Production
Jim Mahan, Vice President, Manufacturing
Delia Bianchin, General Council

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Question 1.a.(i)



CERTIFICATE OF ANALYSIS

Work Order Number:

14J0859

Penn United Technologies
Attn: Steve Berteotti
799 North Pike Road
Cabot, PA 16023

Date Reported 10/27/2014
Date Received 10/03/2014
Account Number 000000016412



Purchase Order:

Subject: Wastewater

TEST	METHOD	RESULT	UNITS	PREPARED	ANALYZED	TECH	NOTES
01 Waste Oil							
Sample Date: 10/03/2014		Sample Time: 06:54					
Reactive Cyanide	EPA 7.3.3.2	<0.0500	mg/kg dry	10/7/14 11:32	10/7/14 14:23	BJJ	
Flashpoint	EPA 1010A	>200	°F	10/13/14 12:15	10/13/14 12:15	JRP	
Solids, Total	SM2540 B-97,-11	811000	mg/L	10/10/14 13:50	10/10/14 13:50	MAD	D
Reactive Sulfide	EPA 7.3.4.2	<20.0	mg/kg dry	10/7/14 15:12	10/7/14 15:13	BJJ	
Arsenic	EPA 7060	< 0.1	mg/kg dry	10/9/14 15:15	10/10/14 15:16	BJJ	
Barium	EPA 6010B	<0.125	mg/kg dry	10/8/14 11:17	10/10/14 11:18	MWR	
Cadmium	EPA 6010B	<0.100	mg/kg dry	10/8/14 11:17	10/10/14 11:18	MWR	
Chromium	EPA 6010B	<0.520	mg/kg dry	10/8/14 11:17	10/10/14 11:18	MWR	
Lead	EPA 6010B	<0.500	mg/kg dry	10/8/14 11:17	10/10/14 11:18	MWR	
Mercury	EPA 7471A	< 0.02	mg/kg dry	10/9/14 15:28	10/10/14 15:29	MWR	
Selenium	EPA 7740	< 0.1	mg/kg dry	10/9/14 15:15	10/13/14 15:16	BJJ	
Silver	EPA 6010B	< 10	mg/kg dry	10/23/14 15:31	10/23/14 15:31	MWR	

Analysis Performed By: Analytical Lab Services / Middletown

Total Organic Halides - TOX	SM5320	11.6 mg/L	10/16/14 14:32	OST
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Reviewed and Approved By:

Andrea Brownfield
Project Manager

The data and information on this, and other accompanying documents, represent only the sample(s) analyzed and is rendered upon condition that it is not to be reproduced wholly or in part for advertising or other purposes without approval from the laboratory.

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Microbac Laboratories, Inc.

1962 Wager Road Erie, PA 16509 | 814.825.8533 p | 814.825.9254 f | www.microbac.com

Page 1 of 11



CERTIFICATE OF ANALYSIS

Work Order Number:

14J0859

Penn United Technologies
Attn: Steve Berteotti
799 North Pike Road
Cabot, PA 16023

Date Reported 10/24/2014
Date Received 10/03/2014
Account Number 000000016412



Purchase Order:

Subject: Wastewater

TEST	METHOD	RESULT	UNITS	PREPARED	ANALYZED	TECH	NOTES
------	--------	--------	-------	----------	----------	------	-------

Some or all of the samples were collected by the customer. The verifiability of the final results are therefore limited by the customer's reported values. Microbac Laboratories, Inc. assumes that all sampling instructions are followed, and the data upon which these final results are based, have been accurately supplied by the client.

Notes and Definitions

Z4 Due to the matrix of the sample containing TCE it was not extracted using EPA method 1664A. It was placed in a pre weighed tin and allowed to evaporate. The residue is being reported as the oil and grease. DJS
H4 The test was performed outside of the EPA recommended holding time of 15 minutes.
H Sample was analyzed past holding time.
D Dilution performed on sample.

MG/KG	= Milligram per Kilogram (PPM)	Negative/Absent	= Bacteria or target analyte not detected
UG/L	= Micrograms per Liter (PPB)	CFU	= Colony Forming Unit
UG/KG	= Micrograms per Kilogram (PPB)	ND	= Not detected at or below the reporting limit
MG/L	= Milligrams per Liter (PPM)	TIC	= Tentatively Identified Compound
1000 UG	= 1 MG	"<"	= Less than (also see "ND")
Positive/Present	= Bacteria or target analyte detected	">"	= Greater than
HSCC	= High Sensitivity Coliform Count	MPN	= Most Probable Number

An E associated with Microbiology values designates that the result obtained was outside of the method specified counting range. Estimated counts are valid, but must be notated as such per regulation.

Project Requested Certification(s):

Certificate ID	Agency
25-00067	PA Department of Environmental Protection

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Microbac Laboratories, Inc.

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CERTIFICATE OF ANALYSIS

Work Order Number:

14J0859

Penn United Technologies
Attn: Steve Berteotti
799 North Pike Road
Cabot, PA 16023

Date Reported 10/24/2014
Date Received 10/03/2014
Account Number 000000016412



Purchase Order:

Subject: Wastewater

TEST	METHOD	RESULT	UNITS	PREPARED	ANALYZED	TECH	NOTES
------	--------	--------	-------	----------	----------	------	-------

Sub-Contract Laboratories:

Reviewed and Approved By:

Date Reviewed and Approved:

10/24/2014

Andrea Brownfield

Project Manager, Microbac Laboratories, Inc. - Erie

Report released by Andrea Brownfield

Any questions regarding this report, please contact your account manager, .

As Regulatory limits frequently change, Microbac Laboratories, Inc. advises the recipient of this report to confirm such limits with the appropriate Federal, state or local authorities before acting on the data provided. For feedback concerning our services, please contact the Managing Director, or J. Trevor Boyce, President, at president@microbac.com.

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Question 1.a.(ii)



CERTIFICATE OF ANALYSIS

Work Order Number:

15C0678

Penn United Technologies
Attn: Steve Berteotti
799 North Pike Road
Cabot, PA 16023

Date Reported 03/31/2015
Date Received 03/05/2015
Account Number 000000016412



Purchase Order:

Subject: Waste Characterization

05 Coolant						
Sample Date: 03/05/2015			Sample Time: 08:45			
Oil & Grease	EPA 1664A	138 mg/L	3/10/15 8:00	3/10/15 8:00	DJS	
pH	SM4500 H+ B-00	8.10 Units	3/9/15 16:41	3/9/15 16:41	JRP	H4
Arsenic	SM3113 B-04	<0.010 mg/L	3/16/15 15:52	3/16/15 16:00	BJJ	
Barium	EPA 200.7, Rv. 4.4	0.135 mg/L	3/12/15 11:27	3/12/15 14:15	MWR	
Cadmium	EPA 200.7, Rv. 4.4	<0.0300 mg/L	3/12/15 11:27	3/12/15 14:15	MWR	
Chromium	EPA 200.7, Rv. 4.4	0.198 mg/L	3/12/15 11:27	3/12/15 14:15	MWR	
Cobalt	EPA 200.7, Rv. 4.4	87.5 mg/L	3/12/15 11:27	3/12/15 14:15	MWR	
Iron	EPA 200.7, Rv. 4.4	<0.500 mg/L	3/12/15 11:27	3/12/15 14:15	MWR	
Lead	EPA 200.7, Rv. 4.4	<0.100 mg/L	3/12/15 11:27	3/12/15 14:15	MWR	
Mercury	SM3112 B-09,-11	<0.002 mg/L	3/12/15 12:14	3/13/15 12:17	BJJ	
Nickel	EPA 200.7, Rv. 4.4	6.83 mg/L	3/12/15 11:27	3/12/15 14:15	MWR	
Selenium	SM3113B-04	<0.010 mg/L	3/16/15 16:28	3/24/15 14:31	BJJ	
Silver	EPA 200.7, Rv. 4.4	<0.100 mg/L	3/12/15 11:27	3/12/15 14:15	MWR	

Analysis Performed By: Analytical Lab Services / Middletown

Total Organic Halides - TOX EPA 9020B See Attached mg/L OST

All samples received in proper condition and results conform to ISO 17025 unless otherwise noted

Some or all of the samples were collected by the customer. The verifiability of the final results are therefore limited by the customer's reported values. Microbac Laboratories, Inc. assumes that all sampling instructions are followed, and the data upon which these final results are based, have been accurately supplied by the client.

Notes and Definitions

- Z4 Due to sample matrix, the largest dilution was made for this sample resulting in greater than 200mg residue present after drying.
- M Matrix interference is present.
- H4 The test was performed outside of the EPA recommended holding time of 15 minutes.
- D Dilution performed on sample.

The data and information on this, and other accompanying documents, represent only the sample(s) analyzed and is rendered upon condition that it is not to be reproduced wholly or in part for advertising or other purposes without approval from the laboratory.

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ALS Environmental



34 Dogwood Lane ■ Middletown, PA 17057 ■ Phone: 717-944-5541 ■ Fax: 717-944-1430 ■ www.alsglobal.com

NELAP Certifications: NJ PA010, NY 11759, PA 22-293 DoD ELAP: A2LA 0818.01
State Certifications: DE ID 11, MA PA0102, MD 12B, VA 460157, WV 343

ANALYTICAL RESULTS

Workorder: 2058309 15C0678

Lab ID: 2058309003

Date Collected: 3/5/2015 08:45

Matrix: Water

Sample ID: 15C0678-05

Date Received: 3/10/2015 10:43

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed	By	Chtr
------------	---------	------	-------	-----	--------	-------------	----------	----	------

WET CHEMISTRY

Halogen, Total Organic
(TOX)

262

ug/L

200

SW846 9020B

3/19/15 13:05 PAG A

Debra J Musser

Ms. Debra J. Musser

Project Coordinator

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Vancouver Waterloo • Winnipeg • Yellowknife United States: Cincinnati • Everett • Fort Collins • Holland • Houston • Middletown • Salt Lake City • Spring City • York Mexico: Monterrey

Report ID: 2058309 - 3/20/2015

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Page 12 of 14

Question 1.a.(iii)

2540-PM-BWM0395 Rev. 8/2008

Form



pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WASTE MANAGEMENT

FORM U

REQUEST TO PROCESS OR DISPOSE OF RESIDUAL WASTE

This form must be fully and accurately completed. All required information must be typed or legibly printed in the spaces provided. If additional space is necessary, identify each attached sheet as Form U, reference the item number and identify the date prepared. The date on attached sheets needs to match the date noted below.

Date Prepared/Revised January 6, 2014

DEP USE ONLY
Date Received & General Notes

SECTION A: LANDFILL CLIENT (LANDFILL OR PROCESSING FACILITY) OWNER INFORMATION

DEP Client ID# 25747 DEP Client Type / Code PACOR

Organization Name or Registered Fictitious Name
SENECA LANDFILL INCORPORATED

SECTION B: LANDFILL SITE (LANDFILL OR PROCESSING FACILITY) INFORMATION

DEP Site ID# 524239 Site Name SENECA LANDFILL Landfill Permit ID# 100403

Site Contact Last Name Ott First Name John MI W Suffix

Site Contact Title Residual Waste & Compliance Specialist Site Contact Email Address ResidualWasteSpecialist@senecalandfill.com

SECTION C: GENERATOR CLIENT (GENERATOR OF THE WASTE) INFORMATION

Company Name Penn United Technology DEP Generator ID#

Company Contact Last Name Barteotti First Name Steve MI Suffix

Company Mailing Address Line 1 PO Box 399 Company Mailing Address Line 2

Company Address Last Line - City Saxonburg State PA Zip+4 16056 Country USA

Company Phone 724-352-1507 Ext 4610 Company Email Address steve_barteotti@pennunited.com

Company Contact Last Name First Name MI Suffix

Contact Phone Ext Contact Email Address

If a Subsidiary, Name of Parent Company

Is the waste generated at the Company Mailing Address (noted above)?

☐ Yes ☒ No

If 'No', describe location of waste generation and storage.

799 & 795 N Pike Rd, Cabot, PA 16023

Township Jefferson Twp County Butler State PA

SECTION D: WASTE DESCRIPTION

Residual Waste Code	Residual Waste Code Description	Amount	Unit of Measure	Time Frame
710	Plant Trash	100	<input type="checkbox"/> cu yd <input type="checkbox"/> gal <input type="checkbox"/> lb <input checked="" type="checkbox"/> ton	<input checked="" type="checkbox"/> Annual <input type="checkbox"/> One Time

1. GENERAL PROPERTIES

a. pH Range 6.0 to 9.0 (based on analyses or knowledge)

b. Physical State
☐ Liquid Waste (EPA Method 9095)
☒ Solid (EPA Method 9095)
☐ Gas (ambient temperature & pressure)

c. Physical Appearance Color various Odor none
 Number of Solid or Liquid Phases of Separation 1
 Describe each phase of separation.
 solid waste

d. Attached is information from the generator certifying that a hazardous waste determination has been done and that the waste is not hazardous waste as defined in 40 CFR 261, as incorporated by reference at 25 Pa. Code 261a.1. ☒ Yes ☐ No
Caution: If 'No', the application form is incomplete.

e. Is the waste treated hazardous waste? ☐ Yes ☒ No
If 'Yes', list the hazardous waste code(s) that apply to the hazardous waste before treatment.

If 'Yes', what treatment option was selected?

What limit was required to be met by the treatment option?

Provided a copy of the certification required under 40 CFR 268.7(a), as incorporated by reference at 25 Pa. Code 268a.1, that the waste meets all the land disposal restriction requirements, as specified in 40 CFR Part 268, Subpart D (Land Disposal Restrictions-Treatment Standards). ☐ Yes ☒ No

f. Has the waste been delisted as a hazardous waste by DEP or US EPA? ☐ Yes ☐ No ☒ N/A

g. Has the waste been accepted for disposal/processing at another Pennsylvania facility? ☐ Yes ☒ No
If 'Yes', list the facility permit ID number(s).

h. Has an application for disposal/processing of the waste at another Pennsylvania facility been submitted? ☐ Yes ☒ No
If 'Yes', list the facility permit ID number(s).

2. ANALYSIS ATTACHMENTS

a. Has a detailed physical, chemical and radiological characterization of the waste and its leachate been conducted? ☐ Yes ☒ No

If 'No', provide detailed explanation supporting use of generator knowledge in lieu of actual analysis.
generator knowledge and certification

If 'Yes', attached is a description of the waste sampling methods in accordance with the waste sampling plan as required in §271.611(a)(3) or §287.132(a)(3) of the *Final Guidance Document on Radioactivity Monitoring at Solid Waste Processing and Disposal Facilities* (Document Number 250-3100-001). ☐ Yes ☒ No

b. Laboratory Accreditation Number

3. PROCESS DESCRIPTION & SCHEMATIC ATTACHMENTS

a. Attached is a detailed description of the manufacturing and/or pollution control processes producing the waste. ☒ Yes ☐ No
If 'No', provide explanation.

b. Attached is a schematic of the manufacturing and/or pollution control processes producing the waste. ☒ Yes ☐ No
If 'No', provide explanation.

c. Attached is the substantiation for a confidentiality claim (if portions of the information submitted are confidential). ☐ Yes ☐ No ☒ N/A

4. CHEMICAL ANALYSIS WAIVER

Categories of residual wastes that qualify for the waiving of chemical analysis by the Department are listed below. Check the appropriate box(es) that match the waste proposed to be accepted for disposal.

- | | |
|---|---|
| <input type="checkbox"/> burnt demolition debris | <input type="checkbox"/> carpet scraps |
| <input checked="" type="checkbox"/> cured rubber scrap | <input checked="" type="checkbox"/> empty containers (uncontaminated) |
| <input checked="" type="checkbox"/> fabric/cloth/textile/leather wastes (excluding treatment sludges) | <input type="checkbox"/> fiberglass insulation scrap |
| <input type="checkbox"/> food wastes (excluding treatment sludges) | <input checked="" type="checkbox"/> hot drained used oil filters (non-terne plated) |
| <input checked="" type="checkbox"/> metal scrap (excluding powdered grindings or if contaminated with fluids or oils) | <input type="checkbox"/> sawdust (excluding treated wood) |
| <input type="checkbox"/> shingle scrap | <input checked="" type="checkbox"/> waste paper |
| <input checked="" type="checkbox"/> waste plastic (excluding extrusion manufacturing & uncured resins) | <input checked="" type="checkbox"/> wood wastes (excluding treated wood) |
| <input type="checkbox"/> Other (explain) | |

All waste types not listed above must be approved in writing in the permit by the Department prior to processing or disposal facility acceptance.

SECTION E PROPOSED PROCESSING, STORAGE AND/OR DISPOSAL METHOD

Will any special handling procedures (besides direct disposal) described in the waste acceptance plan, be used when managing the waste? ☐ Yes ☒ No

If 'Yes', describe.

Is this material re-used for construction or operation of the facility? ☐ Yes ☒ No

If Yes, describe.

SECTION F SOURCE REDUCTION STRATEGY

Form 25R must be completed by the generator and attached to this application unless waived in the instructions to that form.

Form 25R attached. ☒ Yes ☐ No ☐ Waived

SECTION G CERTIFICATION OF PROCESSING OR DISPOSAL FACILITY

I hereby certify that the statements of fact contained therein are true and correct to the best of my knowledge, information and belief. This statement and verification is made subject to the penalties of 18 Pa. C.S.A. Section 4904, relating to un-sworn falsification to authorities.

Name of Responsible Official

John W. Ott

Title

Residual Waste & Compliance Specialist

Signature

Date

FORM 25R

SECTION A. APPLICANT IDENTIFIERApplicant Name: Penn United Technologies, Inc.**SECTION B. GENERAL INFORMATION**

This section must be completed.

Generator: Penn United Technologies, Inc.Contact Person: Steve BerteottiPhone Number: (724) 352-1507 ext. 4610Mailing Address: PO Box 399Saxonburg, PA 16056

799 &

Facility Address: 795 North Pike Road(if different from mailing address) Cabot, PA 16023Facility SIC Code(s): 3544

The information contained in this form is true and correct to the best of my knowledge and belief.

Steve Berteotti

Name of Responsible Official

Steve Berteotti

Signature of Responsible Official

3-31-2011

Date

1. Waste stream name and description:
- ☒
- Residual waste
- ☐
- Hazardous waste

Plant Trash: waste paper, cardboard, wood scraps, plastic wrap, fiberboard, filter material.

2. Describe source reduction actions taken during the past five years. You should quantify any reduction in the weight or toxicity or waste and maintain records to document this reduction. This question is intended to give recognition for past source reduction achievements.

1.) The size of wooden containers made to ship finished product are designed to minimize "dead space" requiring less packing material (for customer to manage).

2.) Shredded clean waste paper for packaging in crates in place of purchased packaging.

3.) Re-use of cardboard boxes where possible.

4) Bale and send paper/ cardboard for recycle.

3. State whether you have established a source reduction program. You may include a statement of top management's support or corporate source reduction goals.

Yes, Penn United Technology recognizes the importance of reviewing and considering all feasible methods available for waste reduction and is committed to continuously improve our processes to minimize the volume or reduce the hazard level of waste. Measurement of success is accomplished by tracking waste volume normalized for production throughput.

Uncontrolled After 5 Business Days from



Penn United Technologies, Inc.

PO Box 399 Saxonburg, Pa. 16056

THIS DOCUMENT CONTAINS CONFIDENTIAL INFORMATION Its use is restricted to employees with a need to know and third parties with a need to know and who have signed a non-disclosure agreement.



Standard Operating Procedure

Title: Hazardous Waste Management		Doc Number ENV-0004 Revision: 1
Department: Corporate Human Resources Production Tooling Area: All	<i>Approved & Released Standard Operating Procedure</i>	Implementation Date: 03/19/2015
Type of Document: Environmental		Review Period - 365 Days

1.0 Purpose:

1.1 To define the process for the collection, handling, labeling and disposal of hazardous waste generated at all Penn United facilities to ensure compliance with regulations and reduce potential for environmental damage.

2.0 Scope:

2.1 This procedure covers all hazardous waste generated and stored at all buildings of Penn United Technologies.

3.0 Responsibilities:

3.1 Managers are responsible for ensuring this procedure is being followed in their areas.

3.2 EHS Department is responsible for

A. Evaluating and determining the waste streams.

B. Ensuring proper personnel have the annual RCRA training and / or DOT training at least once every three years.

C. Evaluating and approving all disposal facilities for disposition of hazardous waste.

4.0 Definitions:

4.1 Hazardous Waste - Waste that is dangerous or potentially harmful to our health or the environment. Hazardous wastes can be liquids, solids, gases, or sludges. They can be discarded commercial products, like cleaning fluids or pesticides, or the by-products of manufacturing processes.

4.2 EHS Department - Environmental, Health and Safety Department for Penn United Technologies

4.3 RCRA Training - Resource Conservation and Recovery Act Training

4.4 DOT - Department of Transportation

4.5 EPA - Environmental Protection Agency

5.0 Procedure:

5.1 Identification

A. The EHS Department will evaluate each waste stream at Penn United to determine if it meets the definition of hazardous waste.

5.2 Storage

A. If a material is designated as hazardous waste, these containers must be placed in the proper storage area and be properly labeled.

B. Containers must be compatible with the hazardous waste being stored.

C. The container must be closed at all times unless material is being added or removed.

D. Containment will be provided by diking or drum containment pallet or spill tray.

E. All containers will display a Hazardous Waste Label per ENV-0005 Section 5.4 Attachments.

F. The storage area will display a sign indicating it to be a Satellite Collection or 90 (or 180) Day Storage Area.

G. The storage areas shall be inspected weekly to ensure no leakage.

H. Containers in a Satellite Storage area can remain there until full or one year whichever comes first.

I. Full containers in a Satellite Storage area must be move to a 90 (or 180) Day storage Area within 3 days.

5.3 Disposal

A. The EHS Department will approve all hazardous waste disposal facilities.

B. The shipper will verify the containers are sealed and proper labels affixed to the container.

C. The shipper will prepare or review the Uniform Hazardous Waste manifest to ensure it is properly completed.

D. The Shipper and hauler will both print and sign their name and date the manifest.

E. A copy of the manifest will be kept by the shipper who will ensure a signed copy from the disposal facility is returned within 35 days. If a copy is not received, they will contact the disposal facility to request a signed manifest copy. If one is not received by day 45, a notice must be submitted to the EPA.

6.0 Records:

6.1 Uniform Hazardous Waste Manifests

A. EHS Department

Indexed by Year, stored File Cabinet in Safety Office, retention 5 year minimum, disposition Shred/Destroy

B. Plating Department

Indexed by Year/Date, stored in Electroplating Engineer's Office, retention 5 year minimum, disposition Shred/Destroy

6.2 RCRA and DOT training records

Indexed by Year, stored File Cabinet in Safety Office, retention 5 year minimum, disposition Shred/Destroy

7.0 Associated Documents:

External Documents:

Associated Documents:

ENV-0005 -- Recycle and Waste Material Storage Management

[Click to Open an Associated Document](#)

8.0 Document Revision History:

Revision: 1	Date Created: 01/21/2015 Date of Last Revision: 03/19/2015	Last Approval Date: 03/19/2015
Document Author: Veronica Trojanovich	Document Manager: Steve Berteotti	

9.0 Reason for Change:

Revision:	Sec/Para Changed	Change Made:	Date
1	N/A	Initial Issue of Document	1/21/15

10 Notification List:

Paul Bergbigler
Brian Berteotti
Al Carr

11.0 Approvals:

First Approver's Signature

Name: Bill Jones/PUT
Title: President

Mar 18, 2015 09:39:53 AM EDT - Approved by: Bill Jones/PUT

Second Approver's Signature

Name: Jerry Purcell/PUT
Title: Executive VP

Mar 19, 2015 02:35:29 PM EDT - Approved by: Jerry Purcell/PUT

Third Approver's Signature

Name: Jim Mahan/PUT
Title: Vice President

Mar 18, 2015 09:11:11 AM EDT - Approved by: Jim Mahan/PUT

Fourth Approver's Signature

Name: Dave Delaney/PUT
Title: QA Manager

Mar 19, 2015 02:56:22 PM EDT - Approved by: Dave Delaney/PUT

Fifth Approver's Signature

Name: Veronica Trojanovich/PUT
Title: Quality Engineer

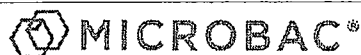
Mar 19, 2015 08:21:39 AM EDT - Approved by: Veronica Trojanovich/PUT

Sixth Approver's Signature

Name: Anita Chiaravalle/PUT
Title: Systems Administrator

Mar 19, 2015 03:56:47 PM EDT - Approved by: Anita Chiaravalle/PUT

Document History Section



CERTIFICATE OF ANALYSIS

Work Order Number:

14J0859

Penn United Technologies
Attn: Steve Berteotti
799 North Pike Road
Cabot, PA 16023

Date Reported 10/27/2014
Date Received 10/03/2014
Account Number 000000016412



Purchase Order:

Subject: ~~Wastewater~~

TEST	METHOD	RESULT	UNITS	PREPARED	ANALYZED	TECH	NOTES
03 Spent Trichloroethylene Sample Date: 10/03/2014 Sample Time: 07:10							
Oil & Grease	EPA 1664A	2700 mg/L		10/21/14 11:00	10/21/14 11:00	DJS	Z4
Arsenic	EPA 7060	< 0.3 mg/kg wet		10/9/14 15:15	10/10/14 15:16	BJJ	
Barium	EPA 6010B	<0.050 mg/kg wet		10/7/14 14:35	10/7/14 14:36	MWR	
Cadmium	EPA 6010B	<0.040 mg/kg wet		10/7/14 14:35	10/7/14 14:36	MWR	
Chromium	EPA 6010B	<0.520 mg/kg wet		10/7/14 14:35	10/7/14 14:36	MWR	
Lead	EPA 6010B	<0.500 mg/kg wet		10/7/14 14:35	10/7/14 14:36	MWR	
Mercury	EPA 7471B	0.137 mg/kg wet		10/9/14 15:20	10/10/14 15:21	BJJ	
Selenium	EPA 7740	< 0.3 mg/kg wet		10/9/14 15:15	10/13/14 15:16	BJJ	
Silver	EPA 6010B	<0.200 mg/kg wet		10/7/14 14:35	10/7/14 14:36	MWR	

Reviewed and Approved By:

Andrea Brownfield

Andrea Brownfield
Project Manager

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Microbac Laboratories, Inc.

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Subject: Wastewater

TEST	METHOD	RESULT	UNITS	PREPARED	ANALYZED	TECH	NOTES
------	--------	--------	-------	----------	----------	------	-------

Some or all of the samples were collected by the customer. The verifiability of the final results are therefore limited by the customer's reported values. Microbac Laboratories, Inc. assumes that all sampling instructions are followed, and the data upon which these final results are based, have been accurately supplied by the client.

Notes and Definitions

- Z4 Due to the matrix of the sample containing TCE it was not extracted using EPA method 1664A. It was placed in a pre weighed tin and allowed to evaporate. The residue is being reported as the oil and grease. DJS
- H4 The test was performed outside of the EPA recommended holding time of 15 minutes.
- H Sample was analyzed past holding time.
- D Dilution performed on sample.

MG/KG	= Milligram per Kilogram (PPM)	Negative/Absent	= Bacteria or target analyte not detected
UG/L	= Micrograms per Liter (PPB)	CFU	= Colony Forming Unit
UG/KG	= Micrograms per Kilogram (PPB)	ND	= Not detected at or below the reporting limit
MG/L	= Milligrams per Liter (PPM)	TIC	= Tentatively Identified Compound
1000 UG	= 1 MG	"<"	= Less than (also see "ND")
Positive/Present	= Bacteria or target analyte detected	">"	= Greater than
HSCC	= High Sensitivity Coliform Count	MPN	= Most Probable Number

An E associated with Microbiology values designates that the result obtained was outside of the method specified counting range. Estimated counts are valid, but must be notated as such per regulation.

Project Requested Certification(s):

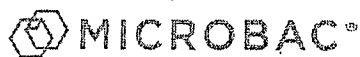
Certificate ID	Agency
25-00067	PA Department of Environmental Protection

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Purchase Order:

Subject: Wastewater

TEST	METHOD	RESULT	UNITS	PREPARED	ANALYZED	TECH	NOTES
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Sub-Contract Laboratories:

Reviewed and Approved By:

Date Reviewed and Approved:

10/24/2014

Andrea Brownfield

Project Manager, Microbac Laboratories, Inc. - Erie

Report released by Andrea Brownfield

Any questions regarding this report, please contact your account manager,

As Regulatory limits frequently change, Microbac Laboratories, Inc. advises the recipient of this report to confirm such limits with the appropriate Federal, state or local authorities before acting on the data provided. For feedback concerning our services, please contact the Managing Director, or J. Trevor Boyce, President, at president@microbac.com.

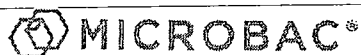
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Cabot, PA 16023

Date Reported 10/27/2014
Date Received 10/03/2014
Account Number 000000016412



Purchase Order:

Subject: Wastewater

TEST	METHOD	RESULT	UNITS	PREPARED	ANALYZED	TECH	NOTES
05 Oily Water Emulsion Sample Date: 10/03/2014 Sample Time: 07:30							
Corrosivity Toward Steel	EPA 1110A Modified	0.08 mmPY		10/8/14 9:05	10/9/14 9:05	JRP	
Reactive Cyanide	EPA 7.3.3.2	<0.0500 mg/kg dry		10/7/14 11:36	10/7/14 14:22	BJJ	
Oil & Grease	EPA 1664A	610 mg/L		10/21/14 11:00	10/21/14 11:00	DJS	
pH	SM4500 H+ B-00	11.7 Units		10/3/14 17:12	10/3/14 17:12	DJS	H4
Solids, Total	SM2540 B-97,-11	4770 mg/L		10/10/14 13:50	10/10/14 13:50	MAD	D
Reactive Sulfide	EPA 7.3.4.2	0.00 mg/kg dry		10/7/14 15:14	10/7/14 15:15	BJJ	
Arsenic	SM3113 B-04	<0.010 mg/L		10/9/14 15:24	10/10/14 15:28	BJJ	
Barium	EPA 200.7, Rv. 4.4	0.330 mg/L		10/7/14 15:38	10/7/14 15:39	MWR	
Cadmium	EPA 200.7, Rv. 4.4	<0.0300 mg/L		10/7/14 15:38	10/7/14 15:39	MWR	
Chromium	EPA 200.7, Rv. 4.4	0.108 mg/L		10/7/14 15:38	10/7/14 15:39	MWR	
Lead	EPA 200.7, Rv. 4.4	0.127 mg/L		10/7/14 15:38	10/7/14 15:39	MWR	
Mercury	SM3112 B-09,-11	<0.002 mg/L		10/9/14 12:14	10/10/14 12:16	BJJ	
Selenium	SM3113B-04	<0.010 mg/L		10/9/14 15:27	10/13/14 15:29	BJJ	
Silver	EPA 200.7, Rv. 4.4	<0.100 mg/L		10/7/14 15:38	10/7/14 15:39	MWR	

Reviewed and Approved By:

Andrea Brownfield

Andrea Brownfield
Project Manager

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CERTIFICATE OF ANALYSIS

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Penn United Technologies
Attn: Steve Berteotti
799 North Pike Road
Cabot, PA 16023

Date Reported 10/24/2014
Date Received 10/03/2014
Account Number 000000016412



Purchase Order:

Subject: Wastewater

TEST	METHOD	RESULT	UNITS	PREPARED	ANALYZED	TECH	NOTES
------	--------	--------	-------	----------	----------	------	-------

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Project Requested Certification(s):

Certificate ID

Agency

25-00067

PA Department of Environmental Protection

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Purchase Order:

Subject: Wastewater

TEST	METHOD	RESULT	UNITS	PREPARED	ANALYZED	TECH	NOTES
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Sub-Contract Laboratories:

Reviewed and Approved By:

Date Reviewed and Approved:

Andrea Brownfield

10/24/2014

Andrea Brownfield
Project Manager, Microbac Laboratories, Inc. - Erie
Report released by Andrea Brownfield

Any questions regarding this report, please contact your account manager, .

As Regulatory limits frequently change, Microbac Laboratories, Inc. advises the recipient of this report to confirm such limits with the appropriate Federal, state or local authorities before acting on the data provided. For feedback concerning our services, please contact the Managing Director, or J. Trevor Boyce, President, at president@microbac.com.

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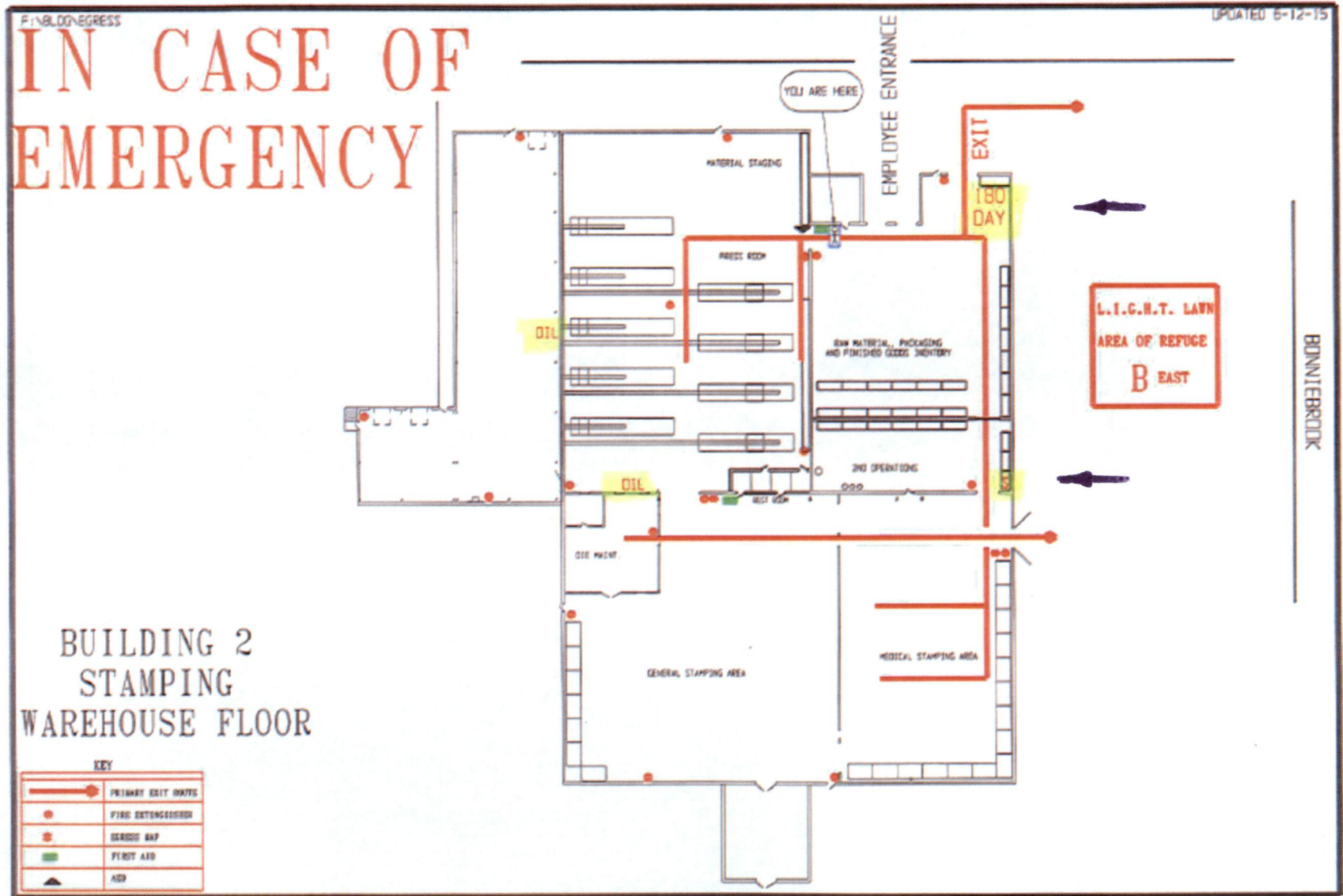
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Microbac Laboratories, Inc.

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Page 7 of 8

B. Building 2



CERTIFICATE OF RECYCLING

GENERATOR

Penn United Technology
Bldg #6
799 N Pike Rd
Cabot PA 16023

DATE RECYCLED: 08/19/2013 MANIFEST/BILL OF LADING: 36085

MATERIAL RECEIVED AND RECYCLED

<u>QUANTITY</u>	<u>DESCRIPTION</u>
2558	4ft Lamps
596	8ft Lamps
6	U Lamps

PO# 198159

SCOTT ELECTRIC, INC., THE UNDERSIGNED, CERTIFIES THAT THE MATERIAL DESCRIBED ABOVE HAS BEEN RECYCLED IN ACCORDANCE WITH ALL FEDERAL, STATE AND LOCAL REGULATIONS.

BY: Dave Moore DATE: 9/3/13

NAME/TITLE: DAVE MOORE
RECYCLING COORDINATOR

USA LAMP & BALLAST
665 HULL ROAD, PO BOX 212
MASON, MI 48854
PHONE: 517-676-0044

SCOTT ELECTRIC
YOUR FULL-SERVICE
ELECTRICAL DISTRIBUTOR
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GREENSBURG, PA 15601
PHONE: 800-442-8045

CERTIFICATE OF RECYCLING

GENERATOR

Penn United Technology Inc
Building 6
799 N Pike Rd
Cabot Pa 16023

DATE RECYCLED: 05/21/2014 MANIFEST/BILL OF LADING: 38265

MATERIAL RECEIVED AND RECYCLED

<u>QUANTITY</u>	<u>DESCRIPTION</u>
1127	4ft Lamps
327	8ft Lamps
6	Compact Fluorescent Lamps
15	HID Lamps

PO# 207821

SCOTT ELECTRIC, INC., THE UNDERSIGNED, CERTIFIES THAT THE MATERIAL DESCRIBED ABOVE HAS BEEN RECYCLED IN ACCORDANCE WITH ALL FEDERAL, STATE AND LOCAL REGULATIONS.

BY: Dave Moore DATE: 06.06.14

NAME/TITLE: DAVE MOORE
RECYCLING COORDINATOR

CLEANLITES RECYCLING, INC.
665 HULL ROAD, PO BOX 212
MASON, MI 48854
PHONE: 517-676-0044

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1000 S. MAIN ST.
GREENSBURG, PA 15601
PHONE: 800-442-8045

Microbac

100 MARSHALL DRIVE
WARRENDALE, PA 15086
(724) 772-0610 FAX (724) 772-1686
TOM ZIERENBERG, MANAGING DIRECTOR
<http://www.microbac.com>

NELAP Accredited, State Laboratory Certification Numbers:
PADEP: 02-00257, WVDEP: 215, WVDHHR: 9951 CM

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CERTIFICATE OF ANALYSIS

PENN UNITED TECHNOLOGY

Mr. Steve Berteotti

Box 399

Saxonburg, PA 16056

Date Reported: 8/31/2010
Date Received: 8/6/2010
Order Number: 1008-00427
Invoice No.: 82734
Cust #: P651
Sample Date:
Sample Time: 0:00
Sampler/Temp:

Permit No.:

Cust P.O.:

SUBJECT: Filter Samples for Analysis

TEST	METHOD	RESULT	UNITS	DATE	TECH
002: TCLP of Nickel Filters continued					
Chromium	SW-846 6010B	<0.05	mg/L	08/21/10	CMG
Lead	SW-846 6010B	0.28	mg/L	08/21/10	CMG
Mercury	SW-846 7470A	<0.002	mg/L	08/20/10	LLS
Selenium	SW-846 6010B	<0.10	mg/L	08/21/10	CMG
Silver	SW-846 6010B	<0.05	mg/L	08/21/10	CMG
Antimony	SW-846 6010B	<0.10	mg/L	08/21/10	CMG
Nickel	SW-846 6010B	3,660	mg/L	08/27/10	CMG
Thallium	SW-846 6010B	<0.10	mg/L	08/21/10	CMG
Beryllium	SW-846 6010B	<0.005	mg/L	08/21/10	CMG

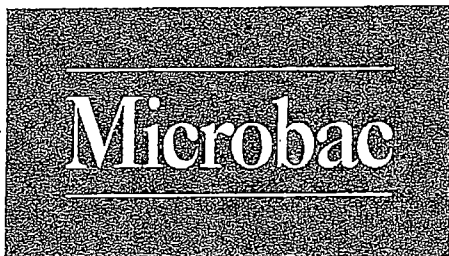
TIN - Lead

003: Tin-Lead Filters					
Ignitability	SW846 1030	<2.2	mm/sec	08/12/10	***
pH	SW-846 9045D	0.9	su	08/17/10	SFS
Reactivity				08/16/10	***
Reactive Cyanide	SW-846 7.3.3.2	<49	mg/Kg	08/16/10	***
Reactive Sulfide	SW-846 7.3.4.2	<100	mg/Kg	08/16/10	***
Total Organic Carbon	♦ ASTM D 3178 (MOD)	14.5	%	08/27/10	RDP
Total Organic Halogens	SW-846 9023	<20	mg/Kg	08/19/10	LLS
Copper	SW-846 6010B	70.6	mg/Kg	08/17/10	CMG
Tin	SW-846 6010B	5,130	mg/Kg	08/17/10	CMG
Zinc	SW-846 6010B	22.1	mg/Kg	08/17/10	CMG
TCLP Extract Preparation	SW-846 1311			08/18/10	MSM
Antimony	SW-846 6010B	<4.98	mg/Kg	08/17/10	CMG
Arsenic	SW-846 6010B	<4.98	mg/Kg	08/17/10	CMG
Barium	SW-846 6010B	0.65	mg/Kg	08/17/10	CMG
Beryllium	SW-846 6010B	<0.249	mg/Kg	08/17/10	CMG
Cadmium	SW-846 6010B	<0.249	mg/Kg	08/17/10	CMG
Chromium	SW-846 6010B	5.04	mg/Kg	08/17/10	CMG

♦ This symbol indicates that the parameter is outside of the laboratory's current scope of accredited methods; however, the analysis, with applicable Quality Control, was performed in accordance with the cited method.

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CERTIFICATE OF ANALYSIS

PENN UNITED TECHNOLOGY

Mr. Steve Berteotti

Box 399

Saxonburg, PA 16056

Date Reported: 8/31/2010
Date Received: 8/6/2010
Order Number: 1008-00427
Invoice No.: 82734
Cust #: P651
Sample Date:
Sample Time: 0:00
Sampler/Temp:

Permit No.:

Cust P.O.:

SUBJECT: Filter Samples for Analysis

TEST	METHOD	RESULT	UNITS	DATE	TECH
003 In Lead Filters CONTINUED					
Lead	SW-846 6010B	4,490	mg/Kg	08/17/10	CMG
Mercury	SW-846 7471A	<0.05	mg/Kg	08/11/10	LLS
Nickel	SW-846 6010B	84.2	mg/Kg	08/17/10	CMG
Selenium	SW-846 6010B	<4.98	mg/Kg	08/17/10	CMG
Silver	SW-846 6010B	<0.50	mg/Kg	08/17/10	CMG
Thallium	SW-846 6010B	<4.98	mg/Kg	08/17/10	CMG

004 TCLP of In Lead Filters					
TCLP Metals				08/21/10	CMG
Arsenic	SW-846 6010B	<0.10	mg/L	08/21/10	CMG
Barium	SW-846 6010B	<1.0	mg/L	08/21/10	CMG
Cadmium	SW-846 6010B	<0.005	mg/L	08/21/10	CMG
Chromium	SW-846 6010B	0.06	mg/L	08/21/10	CMG
Lead	SW-846 6010B	44.6	mg/L	08/21/10	CMG
Mercury	SW-846 7470A	<0.002	mg/L	08/20/10	LLS
Selenium	SW-846 6010B	<0.10	mg/L	08/21/10	CMG
Silver	SW-846 6010B	<0.05	mg/L	08/21/10	CMG
Antimony	SW-846 6010B	<0.10	mg/L	08/21/10	CMG
Nickel	SW-846 6010B	1.34	mg/L	08/21/10	CMG
Thallium	SW-846 6010B	<0.10	mg/L	08/21/10	CMG
Beryllium	SW-846 6010B	<0.005	mg/L	08/21/10	CMG

***Analysis performed by Microbac Laboratories, Inc. - Ohio Valley Division.

***Ignitability analysis performed by Test America.

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CERTIFICATE OF ANALYSIS

PENN UNITED TECHNOLOGY

Mr. Steve Berteotti

Box 399

Saxonburg, PA 16056

Date Reported: 8/31/2010
Date Received: 8/6/2010
Order Number: 1008-00427
Invoice No.: 82734
Cust #: P651
Sample Date:
Sample Time: 0:00
Sampler/Temp:

Permit No.:

Cust P.O.:

SUBJECT: Filter Samples for Analysis

(Nickel)

TEST	METHOD	RESULT	UNITS	DATE	TECH
001 - Nickel Filters					
Ignitability	SW846 1030	<2.2	mm/sec	08/12/10	***
pH	SW-846 9045D	6.2	su	08/17/10	SFS
Reactivity				08/16/10	***
Reactive Cyanide	SW-846 7.3.3.2	<50	mg/Kg	08/16/10	***
Reactive Sulfide	SW-846 7.3.4.2	<100	mg/Kg	08/16/10	***
Total Organic Carbon	♦ ASTM D 3178 (MOD)	57.7	%	08/27/10	RDP
Total Organic Halogens	SW-846 9023	<20	mg/Kg	08/19/10	LLS
Copper	SW-846 6010B	64.9	mg/Kg	08/17/10	CMG
Tin	SW-846 6010B	744	mg/Kg	08/17/10	CMG
Zinc	SW-846 6010B	581	mg/Kg	08/17/10	CMG
TCLP Extract Preparation	SW-846 1311			08/18/10	MSM
Arsenic	SW-846 6010B	<4.90	mg/Kg	08/17/10	CMG
Barium	SW-846 6010B	2.28	mg/Kg	08/17/10	CMG
Beryllium	SW-846 6010B	<0.245	mg/Kg	08/17/10	CMG
Cadmium	SW-846 6010B	<0.245	mg/Kg	08/17/10	CMG
Chromium	SW-846 6010B	28.2	mg/Kg	08/17/10	CMG
Lead	SW-846 6010B	14.0	mg/Kg	08/17/10	CMG
Mercury	SW-846 7471A	<0.05	mg/Kg	08/11/10	LLS
Nickel	SW-846 6010B	80,900	mg/Kg	08/17/10	CMG
Selenium	SW-846 6010B	<4.90	mg/Kg	08/17/10	CMG
Silver	SW-846 6010B	<0.49	mg/Kg	08/17/10	CMG
Thallium	SW-846 6010B	<4.90	mg/Kg	08/17/10	CMG
Antimony	SW-846 6010B	<4.90	mg/Kg	08/17/10	CMG

002 - TCLP of Nickel Filters

TCLP Metals				08/21/10	CMG
Arsenic	SW-846 6010B	<0.10	mg/L	08/21/10	CMG
Barium	SW-846 6010B	<1.0	mg/L	08/21/10	CMG
Cadmium	SW-846 6010B	<0.005	mg/L	08/21/10	CMG

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CERTIFICATE OF ANALYSIS

PENN UNITED TECHNOLOGY
Mr. Steve Berteotti
Box 399
Saxonburg, PA 16056

Date Reported: 8/31/2010
Date Received: 8/6/2010
Order Number: 1008-00427
Invoice No.: 82734
Cust #: P651
Sample Date:
Sample Time: 0:00
Sampler/Temp:

Permit No.:
Cust P.O.:

SUBJECT: Filter Samples for Analysis

TEST	METHOD	RESULT	UNITS	DATE	TECH
002 Filter Samples for Analysis continued					
Chromium	SW-846 6010B	<0.05	mg/L	08/21/10	CMG
Lead	SW-846 6010B	0.28	mg/L	08/21/10	CMG
Mercury	SW-846 7470A	<0.002	mg/L	08/20/10	LLS
Selenium	SW-846 6010B	<0.10	mg/L	08/21/10	CMG
Silver	SW-846 6010B	<0.05	mg/L	08/21/10	CMG
Antimony	SW-846 6010B	<0.10	mg/L	08/21/10	CMG
Nickel	SW-846 6010B	3,660	mg/L	08/27/10	CMG
Thallium	SW-846 6010B	<0.10	mg/L	08/21/10	CMG
Beryllium	SW-846 6010B	<0.005	mg/L	08/21/10	CMG



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CERTIFICATE OF ANALYSIS

PENN UNITED TECHNOLOGY
Mr. Steve Berteotti
Box 399
Saxonburg, PA 16056

Date Reported: 8/27/2010
Date Received: 7/29/2010
Order Number: 1007-02384
Invoice No.: 82097
Cust #: P651
Sample Date: 7/23/2010
Sample Time: 0:00
Sampler/Temp:

Permit No.:

Cust P.O.:

SUBJECT: Liquid Samples for Analysis

Plating Rinse Solution

TEST	METHOD	RESULT	UNITS	DATE	TECH
001 Plating Rinse Water From Holding Tank					
Collected 7/23/10					
Ammonia, Distilled	SM 4500-NH3 B/D	202	mg/L	08/03/10	RDP
Chloride	SM 4500-Cl-E(Discrete)	1,890	mg/L	07/30/10	LAM
pH	SM 4500 H+B	1.4	su	07/29/10	LLS
Reactivity				08/05/10	***
Reactive Cyanide	SW-846 7.3.3.2	<51	mg/L	08/05/10	***
Reactive Sulfide	SW-846 7.3.4.2	<100	mg/L	08/05/10	***
Total Dissolved Solids	SM 2540-C	14,400	mg/L	08/02/10	ADS
Total Suspended Solids	SM 2540-D	1,050	mg/L	08/02/10	ADS
Antimony	EPA 200.7	<0.10	mg/L	08/02/10	CMG
Arsenic	EPA 200.7	<0.10	mg/L	08/02/10	CMG
Barium	EPA 200.7	0.26	mg/L	08/02/10	CMG
Beryllium	EPA 200.7	0.023	mg/L	08/02/10	CMG
Cadmium	EPA 200.7	<0.005	mg/L	08/02/10	CMG
Calcium	EPA 200.7	9.73	mg/L	08/02/10	CMG
Chromium	EPA 200.7	0.51	mg/L	08/02/10	CMG
Copper	EPA 200.7	237	mg/L	08/05/10	CMG
Iron	EPA 200.7	43.2	mg/L	08/02/10	CMG
Lead	EPA 200.7	23.4	mg/L	08/02/10	CMG
Manganese	EPA 200.7	1.23	mg/L	08/02/10	CMG
Mercury	EPA 200.7	<0.0002	mg/L	08/05/10	LLS
Nickel	EPA 245.1	783	mg/L	08/05/10	CMG
Selenium	EPA 200.7	<0.10	mg/L	08/02/10	CMG
Silver	EPA 200.7	0.29	mg/L	08/02/10	CMG
Sodium	EPA 200.7	761	mg/L	08/05/10	CMG
Thallium	EPA 200.7	<0.10	mg/L	08/02/10	CMG
Tin	EPA 200.7	148	mg/L	08/05/10	CMG
Zinc	EPA 200.7	17.0	mg/L	08/02/10	CMG

002 DI Water from Lab Sink

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Pittsburgh Division

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**CERTIFICATE OF ANALYSIS**

Work Order Number:

1100104

PENN UNITED TECHNOLOGY
MR. STEVE BERTEOTTI
BOX 399
SAXONBURG PA, 16056
Waste Characterization

Date Reported 10/26/2011
Date Received 09/29/2011
Date Sampled 09/29/2011

Sample#: 1100104-07

Description: Waste Citric Acid

Date and Time Sampled: 9/29/2011 7:25

Analysis Performed by: Microbac Laboratories Inc., Pittsburgh Division

General Chemistry Analysis		Method	Qualifier	Result	Units	Date	Time	Tech
Chloride		SM 4500 Cl- E		250.3	mg/L	10/03/11	15:47	TEB
Flashpoint		SW846 1010		> 200	°F	10/04/11	12:47	ADS
Oil and Grease		EPA 1664A	C-2	17.8	mg/L	10/10/11	13:10	MSM
pH		SM 4500 H+B	C-2a	1.0	su	10/04/11	12:00	JMU
Total Organic Halogens (TOX)		SM 5320 B		0.78	mg/L	10/12/11	8:29	LLS
TCLP Analysis		Method	Qualifier	Result	Units	Date	Time	Tech
Antimony		SW846-6010B		<0.200	mg/L	10/07/11	13:26	CMG
Arsenic		SW846-6010B		<0.200	mg/L	10/07/11	13:26	CMG
Barium		SW846-6010B		<2.00	mg/L	10/07/11	13:26	CMG
Beryllium		SW846-6010B		<0.010	mg/L	10/07/11	13:26	CMG
Cadmium		SW846-6010B		<0.010	mg/L	10/07/11	13:26	CMG
Chromium		SW846-6010B		0.99	mg/L	10/07/11	13:26	CMG
Lead		SW846-6010B		5.93	mg/L	10/07/11	13:26	CMG
Mercury		SW846-7470A		<0.0020	mg/L	10/06/11	16:26	LLS
Nickel		SW846-6010B		2.81	mg/L	10/07/11	13:26	CMG
Selenium		SW846-6010B		<0.200	mg/L	10/07/11	13:26	CMG
Silver		SW846-6010B		<0.100	mg/L	10/07/11	13:26	CMG
Thallium		SW846-6010B		<0.200	mg/L	10/07/11	13:26	CMG

Analysis Performed by: Microbac Laboratories, Inc. - Ohio Valley

Reactivity, Sulfide		Method	Qualifier	Result	Units	Date	Time	Tech
Reactivity, Sulfide		SW9034		<100	mg/kg	10/10/11	11:00	DLP
Reactivity, Cyanide		Method	Qualifier	Result	Units	Date	Time	Tech
Reactivity, Cyanide		SW9014		<10.0	mg/kg	10/10/11	9:00	DLP

Microbac Laboratories, Inc.**Pittsburgh Division**

100 Marshall Drive Warrendale, PA 15086 Phone:724-772-0610 Fax:724-772-1686

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**CERTIFICATE OF ANALYSIS****Work Order Number:****1051945**

PENN UNITED TECHNOLOGY

MR. STEVE BERTEOTTI

BOX 399

SAXONBURG PA, 16056

Date Reported

6/8/2011

Date Received

05/26/2011

Date Sampled

5/25/2011

Customer #

AP651

Customer P.O.

Resin

Sample#: 1051945-01**Description: Ni/Cu Resin****Date and Time Sampled: 5/25/2011 8:50****Analysis Performed by:** Microbac Laboratories Inc., Pittsburgh Division

General Chemistry Analysis	Method	Qualifier	Result	Units	Date	Time	Tech
pH	SW846 9045		2.2	su	5/27/11	14:16	JAS
TCLP Analysis							
Analysis	Method	Qualifier	Result	Units	Date	Time	Tech
Arsenic	SW846-6010B		<0.100	mg/L	6/07/11	13:28	CMG
Barium	SW846-6010B		<1.00	mg/L	6/07/11	13:28	CMG
Cadmium	SW846-6010B		<0.005	mg/L	6/07/11	13:28	CMG
Chromium	SW846-6010B		<0.05	mg/L	6/07/11	13:28	CMG
Copper	SW846-6010B		34.8	mg/L	6/07/11	13:28	CMG
Lead	SW846-6010B		<0.100	mg/L	6/07/11	13:28	CMG
Mercury	SW846-7470A		<0.0020	mg/L	6/02/11	15:54	LLS
Nickel	SW846-6010B		25.2	mg/L	6/07/11	13:28	CMG
Selenium	SW846-6010B		<0.100	mg/L	6/07/11	13:28	CMG
Silver	SW846-6010B		<0.0500	mg/L	6/07/11	13:28	CMG

Analysis Performed by: Microbac Laboratories, Inc. - Ohio Valley

Reactivity, Cyanide							
Analysis	Method	Qualifier	Result	Units	Date	Time	Tech
Reactivity, Cyanide	SW9014		<10.2	mg/kg	6/03/11	15:45	JBK
Sulfide (Reactivity)							
Analysis	Method	Qualifier	Result	Units	Date	Time	Tech
Reactivity, Sulfide	SW9034		<100	mg/kg	6/03/11	14:10	JBK

Analysis Performed by: TestAmerica Edison

Ignitability, Solids							
Analysis	Method	Qualifier	Result	Units	Date	Time	Tech
Burn Rate	1030		<2.20	mm/sec	6/03/11	14:45	JC

Sample#: 1051945-02**Description: Sn/Pb Resin****Date and Time Sampled: 5/25/2011 8:50****Analysis Performed by:** Microbac Laboratories Inc., Pittsburgh Division

General Chemistry							
Analysis	Method	Qualifier	Result	Units	Date	Time	Tech
pH	SW846 9045		2.0	su	5/27/11	14:16	JAS

Microbac Laboratories, Inc.

Pittsburgh Division

100 Marshall Drive Warrendale, PA 15086 Phone:724-772-0610 Fax:724-772-1686

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CERTIFICATE OF ANALYSIS

Work Order Number:

1051945

PENN UNITED TECHNOLOGY

MR. STEVE BERTEOTTI

BOX 399

SAXONBURG PA, 16056

Resin

Date Reported

6/8/2011

Date Received

05/26/2011

Date Sampled

05/25/2011

Sample#: 1051945-02

Description: Sn/Pb Resin

Date and Time Sampled: 5/25/2011 8:50

Analysis Performed by: Microbac Laboratories Inc., Pittsburgh Division

TCLP Analysis

Analysis	Method	Qualifier	Result	Units	Date	Time	Tech
Arsenic	SW846-6010B		<0.100	mg/L	6/07/11	13:28	CMG
Barium	SW846-6010B		<1.00	mg/L	6/07/11	13:28	CMG
Cadmium	SW846-6010B		<0.005	mg/L	6/07/11	13:28	CMG
Chromium	SW846-6010B		<0.05	mg/L	6/07/11	13:28	CMG
Lead	SW846-6010B		0.912	mg/L	6/07/11	13:28	CMG
Mercury	SW846-7470A		<0.0020	mg/L	6/02/11	15:54	LLS
Selenium	SW846-6010B		<0.100	mg/L	6/07/11	13:28	CMG
Silver	SW846-6010B		<0.0500	mg/L	6/07/11	13:28	CMG
Tin	SW846-6010B		<0.100	mg/L	6/07/11	13:28	CMG

Analysis Performed by: Microbac Laboratories, Inc. - Ohio Valley

Reactivity, Cyanide

Analysis	Method	Qualifier	Result	Units	Date	Time	Tech
Reactivity, Cyanide	SW9014		<9.93	mg/kg	6/03/11	15:45	JBK

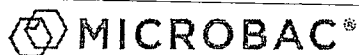
Sulfide (Reactivity)

Analysis	Method	Qualifier	Result	Units	Date	Time	Tech
Reactivity, Sulfide	SW9034		<100	mg/kg	6/03/11	14:10	JBK

Analysis Performed by: TestAmerica Edison

Ignitability, Solids

Analysis	Method	Qualifier	Result	Units	Date	Time	Tech
Burn Rate	1030		<2.20	mm/sec	6/03/11	14:45	JC



CERTIFICATE OF ANALYSIS

Work Order Number:

15C0678

Penn United Technologies
Attn: Steve Berteotti
799 North Pike Road
Cabot, PA 16023

Date Reported 03/31/2015
Date Received 03/05/2015
Account Number 00000016412



Purchase Order:

Subject: Waste Characterization

TEST	METHOD	RESULT	UNITS	PREPARED	ANALYZED	TECH	NOTES
01 Plating Slurry - Thin Slurry							
Sample Date: 03/05/2015				Sample Time: 07:30			
Reactive Cyanide	EPA 7.3.3.2	<0.0809 mg/kg dry		3/10/15 16:55	3/10/15 16:56	BJJ	
Oil & Grease	EPA 1664A	183 mg/L		3/10/15 8:00	3/10/15 8:00	DJS	
pH	SM4500 H+ B-00	5.68 Units		3/9/15 16:41	3/9/15 16:41	JRP	H4
Solids, Total	SM2540 G	61.8 %		3/6/15 14:30	3/6/15 14:30	MAD	
Reactive Sulfide	EPA 7.3.4.2	<32.4 mg/kg dry		3/10/15 9:17	3/10/15 9:20	BJJ	
Arsenic	SM3113 B-04	<0.250 mg/L		3/16/15 15:52	3/16/15 16:00	BJJ	M
Barium	EPA 200.7, Rv. 4.4	<0.100 mg/L		3/12/15 9:14	3/20/15 9:15	MWR	
Cadmium	EPA 200.7, Rv. 4.4	<0.300 mg/L		3/12/15 9:14	3/20/15 9:15	MWR	
Chromium	EPA 200.7, Rv. 4.4	<1.00 mg/L		3/12/15 9:14	3/20/15 9:15	MWR	
Cobalt	EPA 200.7, Rv. 4.4	<1.00 mg/L		3/12/15 9:14	3/20/15 9:15	MWR	
Copper	EPA 200.7, Rv. 4.4	30.7 mg/L		3/12/15 9:14	3/20/15 9:15	MWR	
Iron	EPA 200.7, Rv. 4.4	<5.00 mg/L		3/12/15 9:14	3/20/15 9:15	MWR	
Lead	EPA 200.7, Rv. 4.4	<1.00 mg/L		3/12/15 9:14	3/20/15 9:15	MWR	
Mercury	SM3112 B-09,-11	<0.002 mg/L		3/12/15 12:14	3/13/15 12:17	BJJ	
Nickel	EPA 200.7, Rv. 4.4	521 mg/L		3/12/15 9:14	3/20/15 9:15	MWR	
Selenium	SM3113B-04	<1.00 mg/L		3/16/15 16:28	3/24/15 14:31	BJJ	M
Silver	EPA 200.7, Rv. 4.4	<1.00 mg/L		3/12/15 9:14	3/20/15 9:15	MWR	
Tin	EPA 200.7, Rv. 4.4	26.7 mg/L		3/12/15 15:35	3/23/15 15:36	MWR	

Analysis Performed By: Analytical Lab Services / Middletown

Total Organic Halides - TOX EPA 9020B See Attached mg/L OST

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ALS Environmental



34 Dogwood Lane ■ Middletown, PA 17057 ■ Phone: 717-944-5541 ■ Fax: 717-944-1430 ■ www.alsglobal.com

NELAP Certifications: NJ PA010, NY 11759, PA 22-293 DoD ELAP: A2LA 0818.01
State Certifications: DE ID 11, MA PA0102, MD 128, VA 460157, WV 343

ANALYTICAL RESULTS

Workorder: 2058309 15C0678

Lab ID: 2058309001

Date Collected: 3/5/2015 07:30

Matrix: Water

Sample ID: 15C0678-01

Date Received: 3/10/2015 10:43

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed	By	Cntr
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WET CHEMISTRY

Halogen, Total Organic (TOX)	3440		ug/L	1000	SW846 9020B		3/19/15 12:29	PAG	A
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Debra J Musser

Ms. Debra J. Musser
Project Coordinator

ALS Environmental Laboratory Locations Across North America

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Report ID: 2058309 - 3/20/2015

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REPORT OF ANALYSIS

Mr. Richard Garlitz
Bradburne, Briller & Johnson - Pitt
1641 Saw Mill Run Blvd.
Pittsburgh, PA 15210

October 07, 2011

Date Received : September 27, 2011
Description :

ESC Sample # : L538352-01

Sample ID : FILTER PRESS SLUDGE

Site ID :

Collected By : ACS
Collection Date : 08/25/11 11:00

Project : R1106107

Parameter	Result	Det. Limit	Units	Limit	Method	Date/Time	By	Dil
TCLP Extraction	-				1311	09/29/11 0748	MVE	1
Mercury	BDL	0.0010	mg/l	0.20	7470A	09/29/11 1720	MMH	1
Arsenic	BDL	0.050	mg/l	5.0	6010B	09/30/11 0004	CAH	1
Barium	BDL	0.15	mg/l	100	6010B	09/30/11 0004	CAH	1
Cadmium	0.12	0.050	mg/l	1.0	6010B	09/30/11 0004	CAH	1
Chromium	BDL	0.25	mg/l	5.0	6010B	09/30/11 0100	CAH	5
Copper	22.	0.050	mg/l		6010B	09/30/11 0004	CAH	1
Iron	73.	0.50	mg/l		6010B	09/30/11 0004	CAH	1
Lead	0.065	0.050	mg/l	5.0	6010B	09/30/11 0004	CAH	1
Nickel	140	0.25	mg/l		6010B	09/30/11 0100	CAH	5
Selenium	BDL	0.050	mg/l	1.0	6010B	09/30/11 0004	CAH	1
Silver	BDL	0.050	mg/l	5.0	6010B	09/30/11 0004	CAH	1
Tin	1.3	0.050	mg/l		6010B	09/30/11 0004	CAH	1

BDL - Below Detection Limit

Det. Limit - Estimated Quantitation Limit (EQL)

Limit - Maximum Contaminant Level as established by the US EPA

Note:

The reported analytical results relate only to the sample submitted.

This report shall not be reproduced, except in full, without the written approval from ESC.

Reported: 10/07/11 18:15 Printed: 10/07/11 18:15

Microbac Laboratories**Pittsburgh Division**

100 Marshall Drive Warrendale, PA 15086 Phone:724-772-0610 Fax:724-772-1686

www.microbac.com

Microbac**CERTIFICATE OF ANALYSIS****Work Order Number:****1100104****PENN UNITED TECHNOLOGY****MR. STEVE BERTEOTTI****BOX 399****SAXONBURG PA, 16056****Waste Characterization****Date Reported****10/26/2011****Date Received****09/29/2011****Date Sampled****09/29/2011****Sample#: 1100104-04****Description: Waste Coolant****Date and Time Sampled: 9/29/2011 7:00****Analysis Performed by: Microbac Laboratories Inc., Pittsburgh Division****General Chemistry continued****Analysis****Method****Qualifier****Result Units****Date****Time****Tech**

Oil and Grease

EPA 1664A

C-2

11800 mg/L

10/10/11

13:10

MSM

pH

SM 4500 H+B

8.8

su

10/04/11

12:00

JMU

Total Organic Halogens (TOX)

SM 5320 B

See Note

mg/L

10/25/11

17:27

PVF

TCLP Analysis**Analysis****Method****Qualifier****Result Units****Date****Time****Tech**

Antimony

SW846-6010B

<0.200 mg/L

10/07/11

13:26

CMG

Arsenic

SW846-6010B

<0.200 mg/L

10/07/11

13:26

CMG

Barium

SW846-6010B

<2.00 mg/L

10/07/11

13:26

CMG

Beryllium

SW846-6010B

<0.010 mg/L

10/07/11

13:26

CMG

Cadmium

SW846-6010B

0.102 mg/L

10/07/11

13:26

CMG

Chromium

SW846-6010B

0.23 mg/L

10/07/11

13:26

CMG

Lead

SW846-6010B

6.80 mg/L

10/07/11

13:26

CMG

Mercury

SW846-470A

<0.0020 mg/L

10/07/11

16:26

LLS

Nickel

SW846-6010B

5.06 mg/L

10/07/11

13:26

CMG

Selenium

SW846-6010B

0.285 mg/L

10/07/11

13:26

CMG

Silver

SW846-6010B

<0.100 mg/L

10/07/11

13:26

CMG

Thallium

SW846-6010B

<0.200 mg/L

10/07/11

13:26

CMG

Analysis Performed by: Microbac Laboratories, Inc. - Ohio Valley**Reactivity, Sulfide****Analysis****Method****Qualifier****Result Units****Date****Time****Tech**

Reactivity, Sulfide

SW9034

<100 mg/kg

10/10/11

11:00

DLP

Reactivity, Cyanide**Analysis****Method****Qualifier****Result Units****Date****Time****Tech**

Reactivity, Cyanide

SW9014

<9.97 mg/kg

10/10/11

07:00

DLP

Sample#: 1100104-05**Description: Plating Trench Sludge****Date and Time Sampled: 9/29/2011 8:40****Analysis Performed by: Microbac Laboratories Inc., Pittsburgh Division****Metals****Analysis****Method****Qualifier****Result Units****Date****Time****Tech**

Copper

SW-846 6010B

8000 mg/Kg dry

10/13/11

17:40

CMG

Tin

SW846-6010B

71700 mg/Kg dry

10/13/11

17:40

CMG

Zinc

SW-846 6010B

63.0 mg/Kg dry

10/12/11

16:25

CMG

Microbac Laboratories, Inc.

Pittsburgh Division

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CERTIFICATE OF ANALYSIS

Work Order Number:

1100104

PENN UNITED TECHNOLOGY

MR. STEVE BERTEOTTI

BOX 399

SAXONBURG PA, 16056

Waste Characterization

Date Reported 10/26/2011

Date Received 09/29/2011

Date Sampled 09/29/2011

Sample#: 1100104-05

Description: Plating Trench Sludge

Date and Time Sampled: 9/29/2011 8:40

Analysis Performed by: Microbac Laboratories Inc., Pittsburgh Division

General Chemistry Analysis	Method	Qualifier	Result	Units	Date	Time	Tech
Extractable Organic Halides	SW846 9023		183.7	mg/Kg dry	10/06/11	16:36	LLS
pH	SW846 9045		1.5	su	10/04/11	14:00	JMU
Total Solids	SM 2540 G		60.3	%	10/11/11	8:49	JAS

Analysis Performed by: Microbac Laboratories, Inc. - Ohio Valley

Reactivity, Cyanide Analysis	Method	Qualifier	Result	Units	Date	Time	Tech
Reactivity, Cyanide	SW9014		<9.99	mg/kg	10/10/11	9:00	DLP
Sulfide (Reactivity) Analysis	Method	Qualifier	Result	Units	Date	Time	Tech
Reactivity, Sulfide	SW9034		<100	mg/kg	10/10/11	11:00	DLP

Analysis Performed by: TestAmerica Edison

Ignitability, Solids Analysis	Method	Qualifier	Result	Units	Date	Time	Tech
Burn Rate	1030		<2.20	mm/sec	10/11/11	15:47	MB

Sample#: 1100104-06

Description: TCLP of Plate Trench Sludge

Date and Time Sampled: 9/29/2011 9:45

Analysis Performed by: Microbac Laboratories Inc., Pittsburgh Division

TCLP Analysis	Method	Qualifier	Result	Units	Date	Time	Tech
Antimony	SW846-6010B		<0.100	mg/L	10/14/11	17:43	CMG
Arsenic	SW846-6010B		<0.100	mg/L	10/14/11	17:43	CMG
Barium	SW846-6010B		<1.00	mg/L	10/14/11	17:43	CMG
Beryllium	SW846-6010B		<0.005	mg/L	10/14/11	17:43	CMG
Cadmium	SW846-6010B		<0.005	mg/L	10/14/11	17:43	CMG
Chromium	SW846-6010B		0.07	mg/L	10/14/11	17:43	CMG
Lead	SW846-6010B		0.112	mg/L	10/14/11	17:43	CMG
Mercury	SW846-7470A		<0.0020	mg/L	10/12/11	17:24	LLS
Nickel	SW846-6010B		15.6	mg/L	10/17/11	17:17	CMG
Selenium	SW846-6010B		<0.100	mg/L	10/14/11	17:43	CMG
Silver	SW846-6010B		<0.0500	mg/L	10/14/11	17:43	CMG
Thallium	SW846-6010B		<0.100	mg/L	10/14/11	17:43	CMG


Microbac

MICROBAC LABORATORIES, INC.
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TOM ZIERENBERG, MANAGING DIRECTOR
<http://www.microbac.com>

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State Laboratory Certification Numbers:

PADEP: 02-00257, NC: 42703, WVDEP: 215, 9951 CM KY: 90136

CHEMISTRY · MICROBIOLOGY · FOOD SAFETY · CONSUMER PRODUCTS
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CERTIFICATE OF ANALYSIS

PENN UNITED TECHNOLOGY

Mr. Steve Berteotti

Box 399

Saxonburg, PA 16056

Date Reported: 4/21/2009

Date Received: 4/2/2009

Order Number: 0904-00220

Invoice No.: 45160

Cust #: P651

Sample Date:

Sample Time: 0:00

Sampler/Temp:

Permit No.:

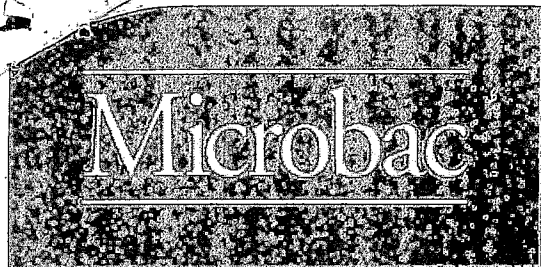
Cust P.O.: 151954

SUBJECT: Rinse Solution Sample for Analysis

TEST	METHOD	RESULT	UNITS	DATE	TECH
001 Black Oxide Line Water Rinse Solution - Water Layer					
Nitrate-Nitrite as Nitrogen	SM 4500-NO3-F(Discrete)	0.11	mg/L	04/09/09	NAH
pH	SM 4500 H+B	7.8	su	04/16/09	SFS
Barium	EPA 200.7	249	mg/L	04/10/09	CMG
Lead	EPA 200.7	<0.10	mg/L	04/08/09	CMG
002 Black Oxide Line Water Rinse Solution - Hydrocarbon Layer					
Flashpoint	ASTM D 93	150	Degrees F	04/07/09	RDP
Total Halogens					
Total Chlorine	ASTM D 808 / ASTM D 512	<200	mg/Kg	04/17/09	RDP
Total Fluorine	ASTM D 808 / ASTM D 1179	<20	mg/Kg	04/15/09	RDP
Barium	SW-846 6010B	3,100	mg/Kg	04/13/09	CMG
Metals Prep				04/09/09	LLS

Report authorized by Tom Zierenberg (Managing Director: Pittsburgh Division)

Technical review performed by Project Manager (signature on file)



Microbac Laboratories, Inc.

Page 1 of 1

100 MARSHALL DRIVE
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TOM ZIERENBERG, MANAGING DIRECTOR
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State Laboratory Certification Numbers:

PADEP: 02-00257, NC: 42703, WVDEP: 215, 9951 CM KY: 90136

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WATER · AIR · WASTES · FOOD · PHARMACEUTICALS · NUTRACEUTICALS

CERTIFICATE OF ANALYSIS

PENN UNITED TECHNOLOGY

Mr. Steve Berteotti

Box 399

Saxonburg, PA 16056

Date Reported: 5/15/2009
Date Received: 4/27/2009
Order Number: 0904-01902
Invoice No.: 46843
Cust #: P651
Sample Date:
Sample Time: 0:00
Sampler/Temp:

Permit No.:

Cust P.O.: 151954

SUBJECT: Rinse Solution Sample for Additional Analysis

TEST	METHOD	RESULT	UNITS	DATE	TECH
001 Black Oxide Line Water Rinse Solution - Oil Layer (0904-220-2)					
TCLP Extract Preparation	SW-846 1311			04/30/09	MSM
002 TCLP of Black Oxide Line Water Rinse Solution - Oil Layer					
TCLP Metals				05/13/09	CMG
Barium	SW-846 6010B	2,290	mg/L	05/13/09	CMG

Report authorized by Tom Zierenberg (Managing Director: Pittsburgh Division)

Technical review performed by Project Manager (signature on file)

SUMMARY OF WASTES from BUILDING #4

No.	Waste Description	Haz // Resid	Location	Analysis	SRS 25R	Disposition	Notes
1	Spent Aqueous Filters: Sn/Pb	Hazardous	799 N Pike	8/31/2010	8-Jul-11	EQ Recovery	Reclaim // D002 // D008 // F006
2	Spent Aqueous Filters: Ni	Hazardous	799 N Pike	8/31/2010	22-Jul-11	EQ Recovery	Reclaim // F006
3	Palladium Filters	Residual	799 N Pike	Generator Knowledge	31-Mar-11	Sabin, Sims, Reldan, Advanced	Reclaim
4	Plating Rinse Solution	Hazardous	799 N Pike	7/29/2010	14-Jul-12	Clean Harbors // Envirote // On-Site	D002 // D008
5	Black Oxide Waste (END 5/14)	Hazardous	799 N Pike	4/2/2009	8-Jul-11	McCutcheon	D005
6	Citric Acid Solution	Residual	799 N Pike	9/29/2011	8-Jul-11	EQ Recovery	D002
7	Plating Trench Sludge (AS Needed)	Hazardous	799 N Pike	9/29/2011	8-Jul-11	Tonawanda, NY	D002 // D008 // F006
8	Filter Tanks: Cu // Ni // Sn // Pb	Hazardous	799 N Pike	5/25/2011	15-Jul-11	Seimens	D008 // F006
9	Gold Cyanide Solution	Hazardous	799 N Pike Rd	Generator Knowledge	8-Jul-11	Sabin, Sims, Reldan, Advanced	Reclaim D003 // F007
10	Silver Cyanide Bath Solution	Hazardous	799 N Pike Rd	Generator Knowledge	23-Apr-13	Sabin, Sims, Reldan, Advanced	Reclaim D003 // D011 // F007
11	Evaporator Slurry	Hazardous	795 N Pike Rd	9/25/11, 6/19/14, 3/5/15	14-Jun-13	Envirote	F006
12	Filter Press Cake	Hazardous	795 N Pike Rd	8/25/2011, 3-21-14	14-Jun-13	World Resources Co	Reclaim // F006
13	gold cyanide filters/solids	Hazardous	795 N Pike Rd	Generator Knowledge	18-Oct-12	Sabin, Sims, Reldan, Advanced	Reclaim D003 // F007
14	silver cyanide filters/solids	Hazardous	795 N Pike Rd	Generator Knowledge	18-Oct-12	Sabin, Sims, Reldan, Advanced	Reclaim D003 // D011 // F007

11/13/2015